SPECIFICATIONS

Recording system 4-track 2-channel stereo

Fast-forward and rewind time
Approx. 100 sec. (with C-60 cassette)

Bias frequency 105 kHz

Signal-to-noise ratio (NAB, at peak level)

Cassette \ Dolby NR switch	OFF	B-TYPE ON	C-TYPE ON
TYPE IV (Sony METALLIC)	58 dB	65 dB	71 dB
TYPE III (Sony FeCr)	59 dB	66 dB	72 dB
TYPE II (Sony UCX)	57 dB	64 dB	70 dB
TYPE I (Sony BHF or HFX)	54 dB	61 dB	67 dB

Total harmonic distortion
1.0% (with Sony METALLIC and FeCr cassettes)

Frequency response DOLBY NR OFF

- With TYPE IV cassette (Sony METALLIC)
  20 - 16,000 Hz
  30 - 15,000 Hz (±3 dB)
  30 - 13,000 Hz (±3 dB, 0 VU recording)
  30 - 15,000 Hz (DIN)
- With TYPE III cassette (Sony FeCr)
  20 - 16,000 Hz
  30 - 15,000 Hz (±3 dB)
  30 - 15,000 Hz (DIN)
- With TYPE II cassette (Sony UCX)
  20 - 16,000 Hz
  30 - 15,000 Hz (±3 dB)
  30 - 15,000 Hz (DIN)
- With TYPE I cassette (Sony BHF or HFX)
  20 - 15,000 Hz
  30 - 14,000 Hz (DIN)

Tape Transport Mechanism Type	TCM-130V6

0dB = 0.775V

— Continued on page 2 —

MICROFILM

SERVICE MANUAL

Wow and flutter	0.065% WRMS (NAB) ±0.2% (DIN)
Inputs	Line inputs (phono jacks) Sensitivity 77.5 mV (−20 dB) Input impedance 50 k ohms
Outputs	Line outputs (phono jacks) Output level 0.435 V (−5 dB) at load impedance 50 k ohms Load impedance over 10 k ohms

General

Power requirements	AEP: 220 V ac, 50/60 Hz (240 V ac adjustable by authorized Sony personnel) UK: 240 V ac, 50/60 Hz (220 V ac adjustable by authorized Sony personnel) US, Canadian: 120 V ac, 60 Hz E: 110, 120, 220 or 240 V ac adjustable, 50/60 Hz
Power consumption	11 watts
Dimensions	Approx. 355 × 105 × 245 mm (w/h/d) (14 × 4 1/8 × 9 3/4 inches) including projecting parts and controls
Weight	Approx. 4.0 kg (8 lbs 14 oz)

SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

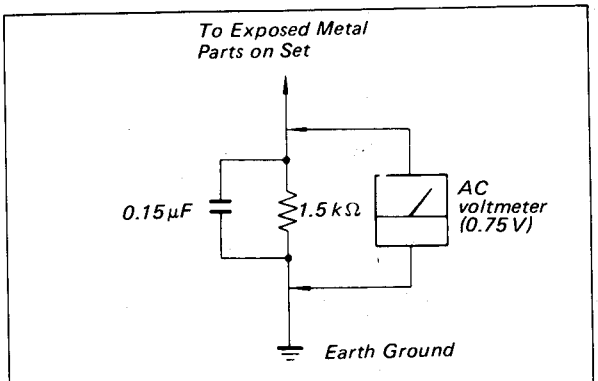
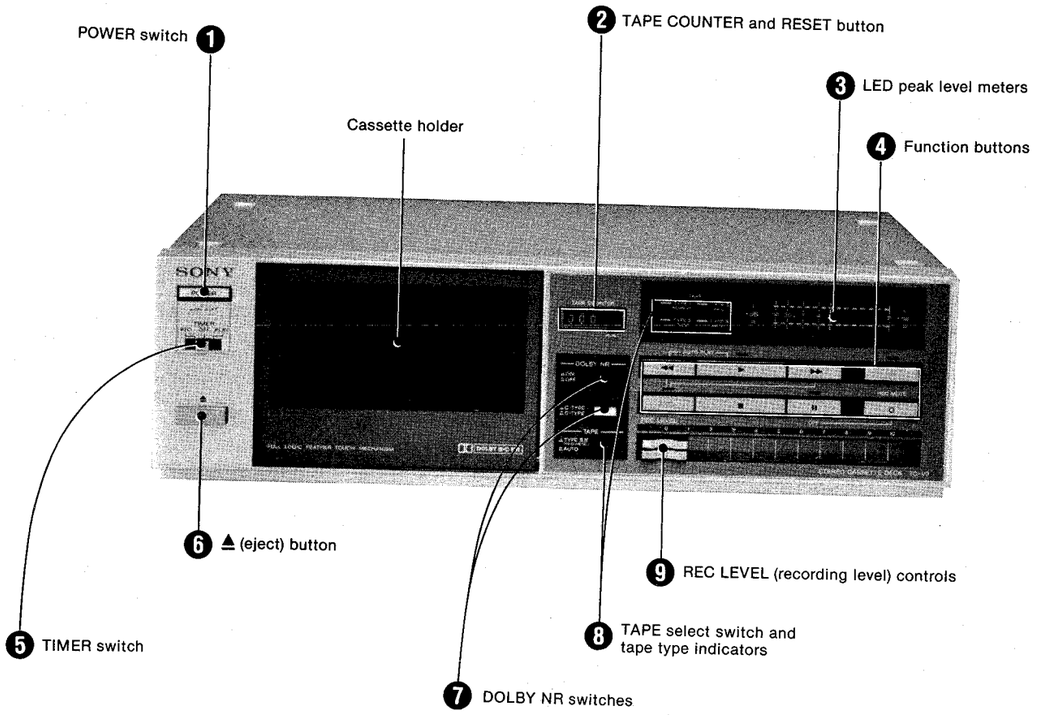


Fig. A. Using an AC voltmeter to check AC leakage.

FUNCTION OF CONTROLS

The numbers in the photo are keyed to the following explanations.


POWER switch 1
2 TAPE COUNTER and RESET button
3 LED peak level meters
Cassette holder
4 Function buttons
6 ▲ (eject) button
9 REC LEVEL (recording level) controls
5 TIMER switch
8 TAPE select switch and tape type indicators
7 DOLBY NR switches

❶ POWER switch
This turns the power on or off. The peak level meters illuminate when the unit is turned on.

❷ TAPE COUNTER and RESET button
The tape counter provides a numerical reference point while recording which can be used to index a recorded cassette. To reset to zero, press the RESET button.

❸ LED peak level meters
These meters show the peak input level of each channel during recording, and recorded levels in the playback mode. They follow the transient peaks of high-level inputs that are too brief to be followed by conventional VU meters so that the optimum recording level can be accurately set.

❹ Function buttons
It is possible to switch directly from one mode to another. The indicator lamps light when the tape deck is in the forward, record, pause or AMS mode.

◄◄ (rewind) button: Press this button to rewind the tape.
► (forward) button: Press this button to play the tape back. To record, press this button while holding the ● button down.
►► (fast-forward) button: Press this button to advance the tape rapidly.
● (record) button: Press this button together with the ► button to start recording. Also press this button before adjusting the recording level.
AMS (Automatic Music Sensor) button: To operate the AMS, press this button and then press the ►► or ◄◄ button.
■ (stop) button: To stop the tape, press this button. The tape will stop automatically when it is completely wound in either direction.
II (pause) button: To pause for a moment during recording or playback, press this button. This button is also used to release the record muting mode.
O (record muting) button: Press this button to eliminate unwanted material and to insert a blank space during recording.

❺ TIMER switch
You can set the unit to record or play back at a predetermined time by connecting any commercially available timer. To record, set this timer switch to REC. To playback, set it to PLAY.

❻ ▲ (eject) button
Press this button to open the cassette holder.

❼ DOLBY NR switches
The upper switch turns the Dolby NR* (Noise Reduction) system on and off and the lower switch selects either the B-type or C-type Dolby NR system.
To record with the Dolby NR process, depress the ON/OFF switch to the ON position and choose between B-TYPE (⎍) and C-TYPE (⏢).
To record without the Dolby NR process, press the ON/OFF switch again to release.
When playing back, set these switches to the same position used in recording.

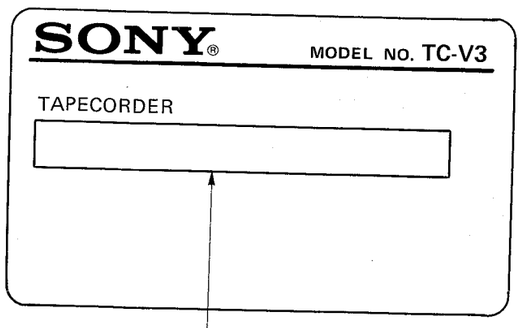
* "Dolby" and the double-D symbol are trade marks of the Dolby Laboratories Licensing Corporation. Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.

❽ TAPE select switch and tape type indicators
Generally set this switch to AUTO (⎍). The automatic tape select system will then operate. When using a TYPE III (Fe-Cr) cassette or a TYPE IV (METAL) cassette which has no METAL tape detector slots, depress this switch to set it to the III Fe-Cr (IV METAL) position (⏢).
When inserting a cassette, one of the tape type indicators will light up depending on the type of tape and the position of the TAPE select switch.

❾ REC LEVEL (recording level) controls
These controls adjust the recording level. The upper slide bar is for the left channel and the lower for the right channel.

MODEL IDENTIFICATION

— Specification Label on Jack Plate —



US, Canadian Model:	AC 120V 60Hz 11W
AEP Model:	AC 220V ~ 50/60Hz 11W
UK Model:	AC 240V ~ 50/60Hz 11W
E Model:	AC 110, 120, 220, 240V ~ 50/60Hz 11W

FEATURES

C-type Dolby NR (noise reduction) system
In addition to the conventional B-type Dolby NR system, this cassette deck employs the newly-developed C-type Dolby NR system which reduces tape noise twice as effectively as the B-type system, The C-type system also incorporates an anti-saturation network to improve the high-frequency dynamic range by 4 dB at 10 kHz.

Full-logic "feather-touch" operation
At the slightest touch, the "feather-touch" function buttons enable you to switch directly from one mode to another without going through the stop mode.

Automatic tape select system
The tape type is automatically detected and the recorder is adjusted to its optimum bias current for recording and the optimum equalization for both recording and playback by simply inserting the cassette in the cassette holder.

The AMS (Automatic Music Sensor) system
Using this system, it is possible to locate the beginning of the selection being played or the following selection. The AMS searches either forward or in reverse for the blank space between selections. Playback will begin automatically from the beginning of the selection.

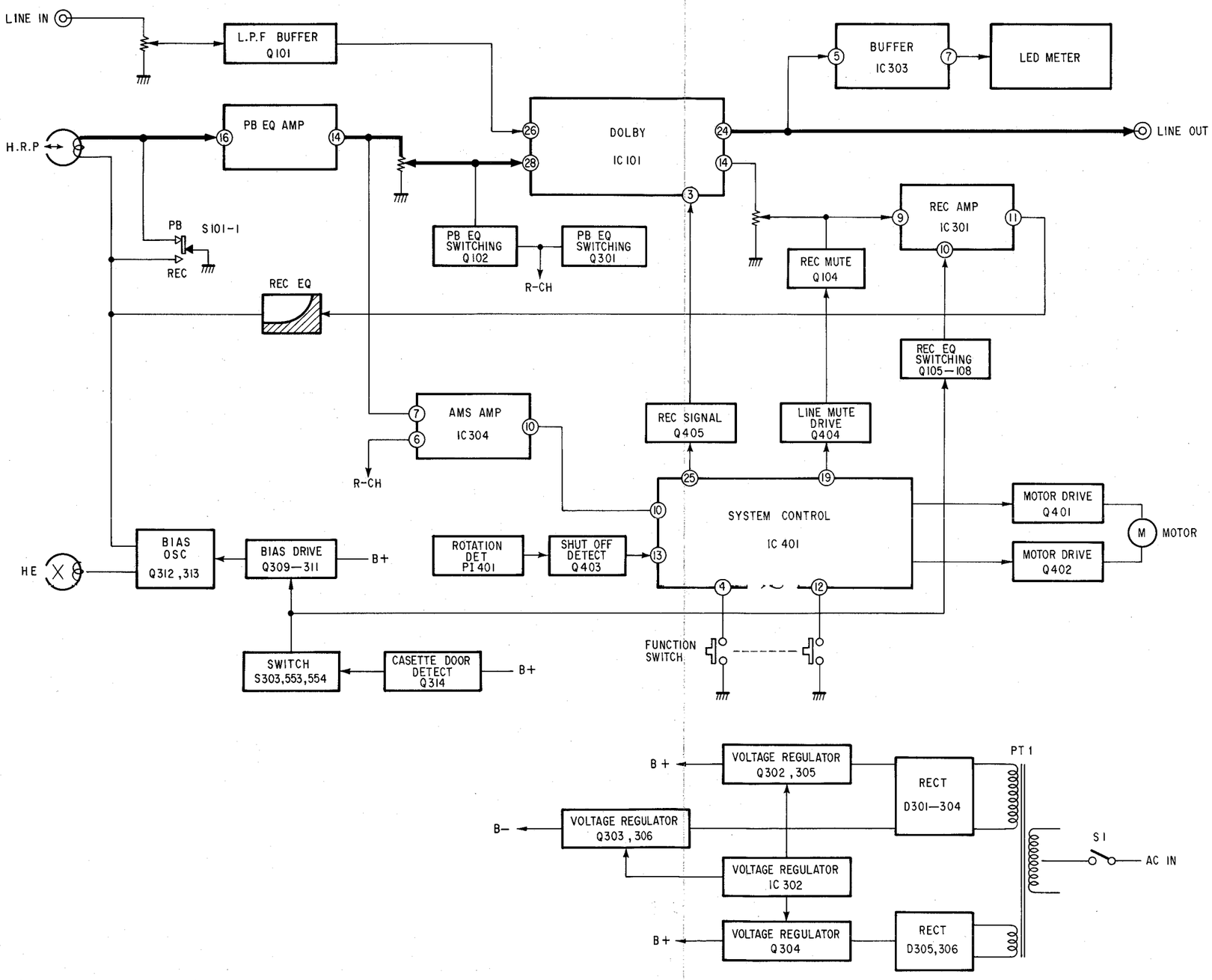
Record muting function
The record muting button enables you to automatically make a 4-second blank space between selections.

Auto play
The auto play function makes automatic replay possible promptly after the tape is rewound to the beginning.

Timer-activated recording and playback
A timer switch is provided to turn the deck on and off any number of times at preset times determined by an optional timer.

SECTION 1
OUTLINE

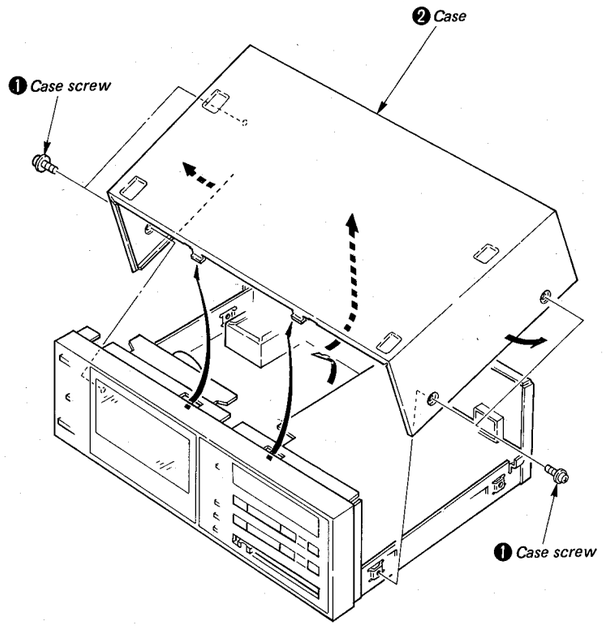
1. BLOCK DIAGRAM



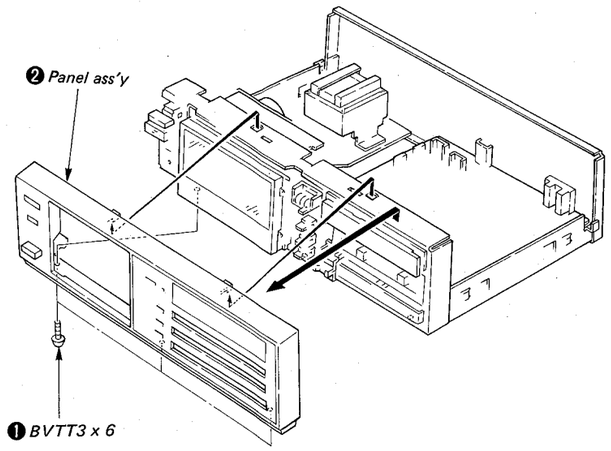
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

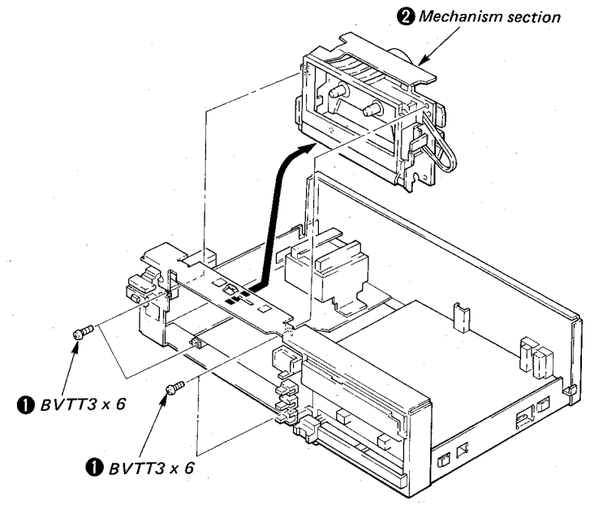
CASE REMOVAL



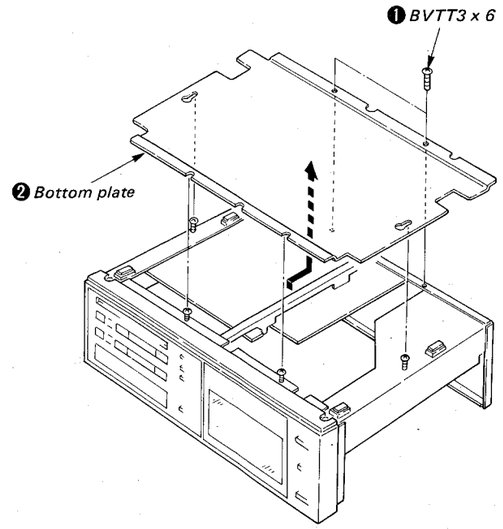
PANEL REMOVAL



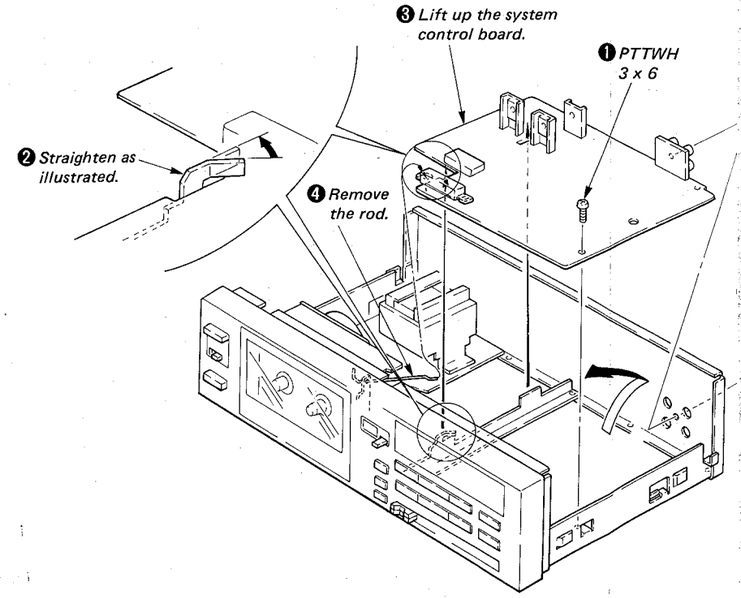
MECHANISM SECTION REMOVAL



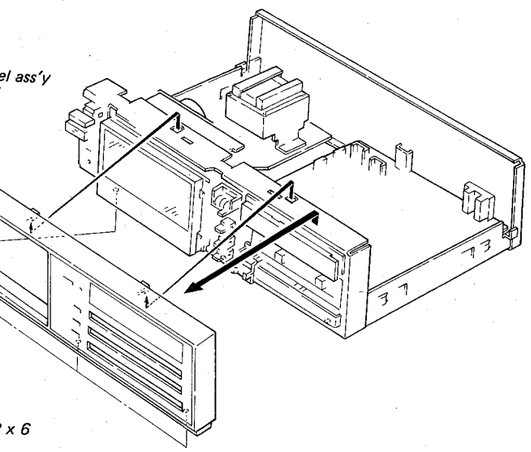
BOTTOM PLATE REMOVAL



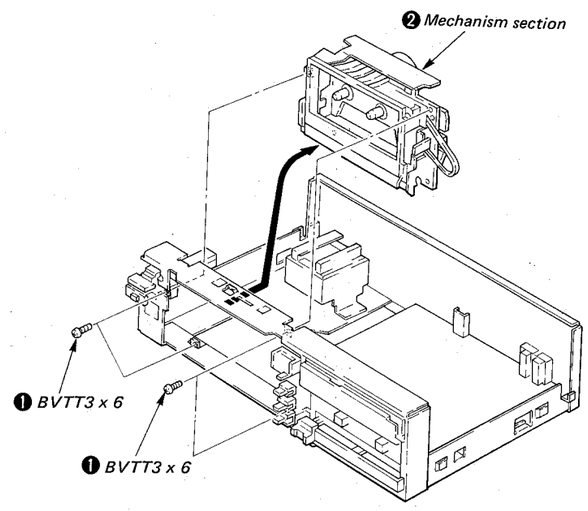
SYSTEM CONTROL BOARD REMOVAL



EMOVAL



MECHANISM SECTION REMOVAL



PC BOARD LOCATION

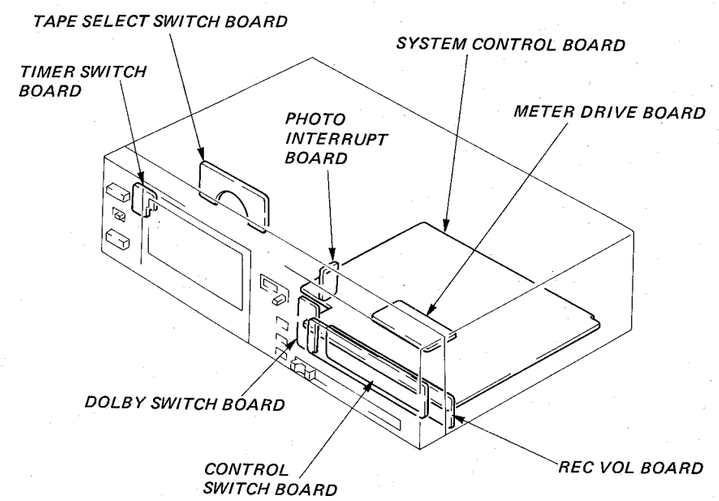
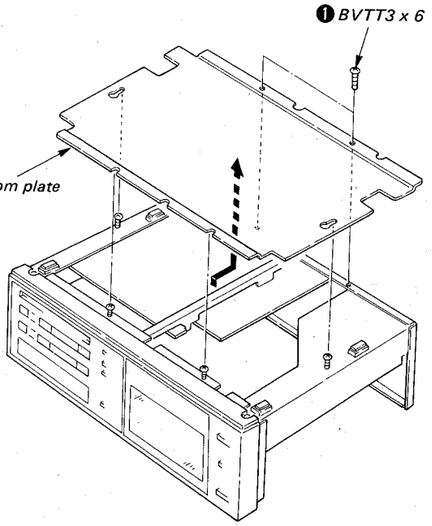
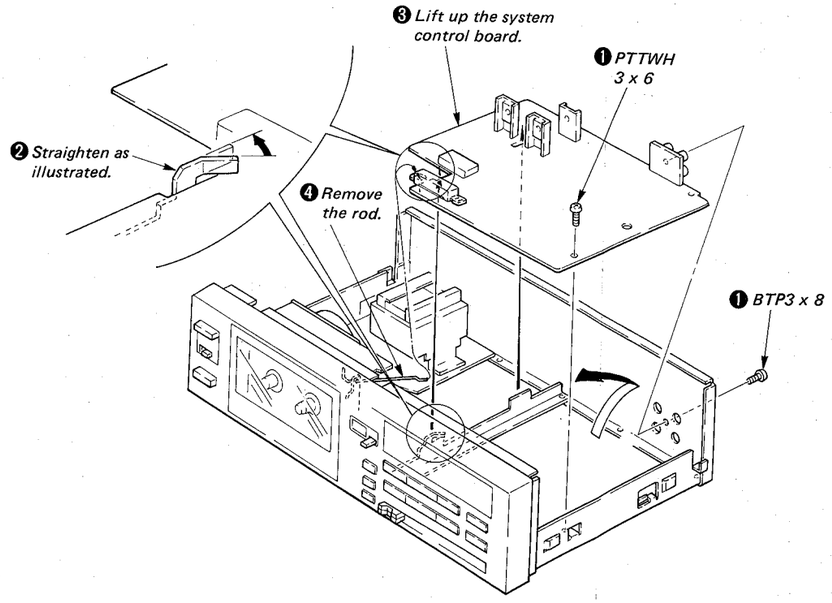


PLATE REMOVAL



SYSTEM CONTROL BOARD REMOVAL



SECTION 3
ADJUSTMENTS

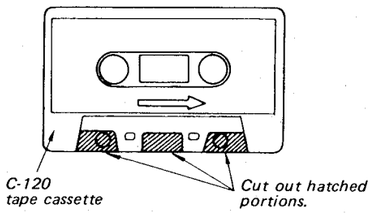
3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

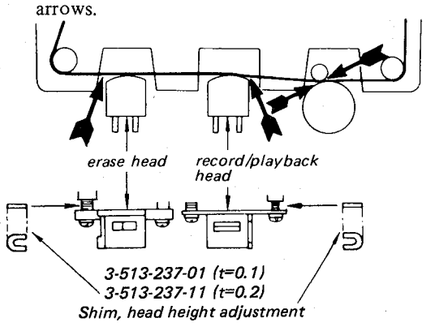
1. Clean the following parts with a denatured-alcohol-moistened swab:
   - record/playback head
   - erase head
   - capstan
   - pinch roller
   - rubber belts
   - idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Head Height Adjustment

1. Prepare an adjustment cassette as shown below, or mirror cassette.



2. In playback mode and viewing from the front, adjust the head heights to eliminate tape curl and tape twist at the portions shown by the arrows.

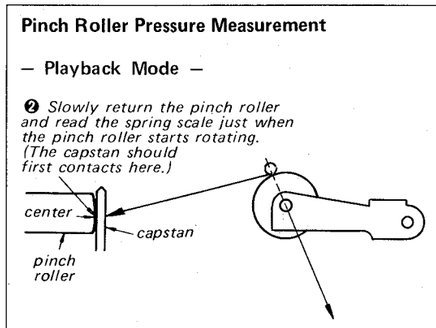


Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	30~55 g·cm (0.41~0.69 oz·inch)
Back Tension	CQ-102C	2.5~5 g·cm (0.03~0.06 oz·inch)
Fast Forward and Rewind	CQ-201B	80~165 g·cm (1.1~2.0 oz·inch)

Pinch Roller Pressure Measurement

– Playback Mode –

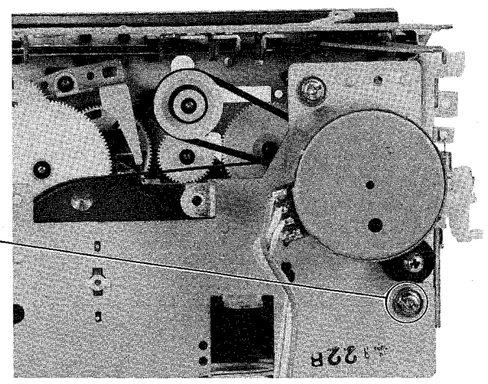

❷ Slowly return the pinch roller and read the spring scale just when the pinch roller starts rotating. (The capstan should first contacts here.)
center
capstan
pinch roller
❶ tension gauge
200~300 g·cm
(2.77~4.16 oz·inch)

Soft Eject Time Adjustment

Specification

Eject time
0.4~2.5 sec.

Set the tape (C-90) and adjust the adjustment screw for the specification.



3-2. ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in this service manual. The adjustments should be performed for both L-CH and R-CH.

- Set the TAPE switches according to the tape as follows.

Tape	TAPE SELECT switch	LED display
CS-15	AUTO	I: NORM
CS-25	AUTO	II: CrO_2
CS-30	Fe-Cr (METAL)	III: Fe-Cr
CS-40	AUTO Fe-Cr (METAL)	IV: METAL

- Switches and controls should be set as follows unless otherwise specified.

  DOLBY NR switch: OFF
  DOLBY B/C switch: B
  TAPE switch: AUTO (I: NORM)
  TIMER switch: OFF

- Standard Record:

  Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Standard Input Level

	MIC	LINE IN
source impedance	300Ω	10kΩ
input level	0.77mV (–60dB)	0.25V (–10dB)

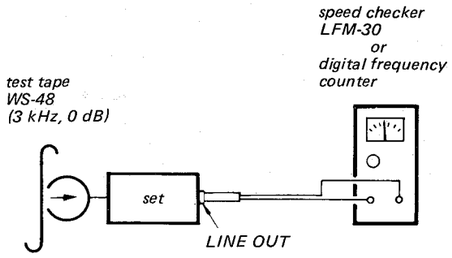
Standard Output Level

	HEADPHONES	LINE OUT
load impedance	8Ω	47kΩ
output level	31mV (–26dB)	0.435V (–5dB)

Capstan Motor Speed Adjustment

Procedure:

Mode: playback

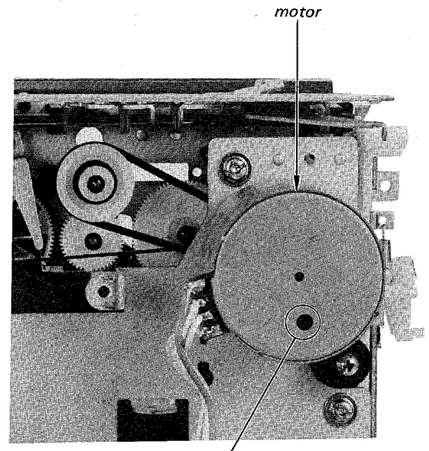


Specification:

Speed checker	Digital frequency counter
–0.8~+0.8%	2,975~3,025Hz

Frequency difference between the beginning and the end of the tape should be within 0.8% (25Hz).

Adjustment Location:



Adjust the speed by using screwdriver. When turning the screw clockwise, speed is faster.

3-2. ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in this service manual. The adjustments should be performed for both L-CH and R-CH.

- Set the TAPE switches according to the tape as follows.

Tape	TAPE SELECT switch	LED display
CS-15	AUTO	I: NORM
CS-25	AUTO	II: CrO_2
CS-30	Fe-Cr (METAL)	III: Fe-Cr
CS-40	AUTO Fe-Cr (METAL)	IV: METAL

- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch: OFF
DOLBY B/C switch: B
TAPE switch: AUTO (I: NORM)
TIMER switch: OFF

- Standard Record:

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Standard Input Level

	MIC	LINE IN
source impedance	300Ω	10kΩ
input level	0.77mV (–60dB)	0.25V (–10dB)

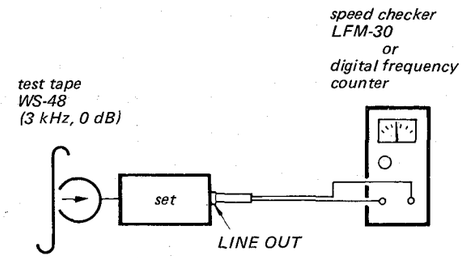
Standard Output Level

	HEADPHONES	LINE OUT
load impedance	8Ω	47kΩ
output level	31mV (–26dB)	0.435V (–5dB)

Capstan Motor Speed Adjustment

Procedure:

Mode: playback

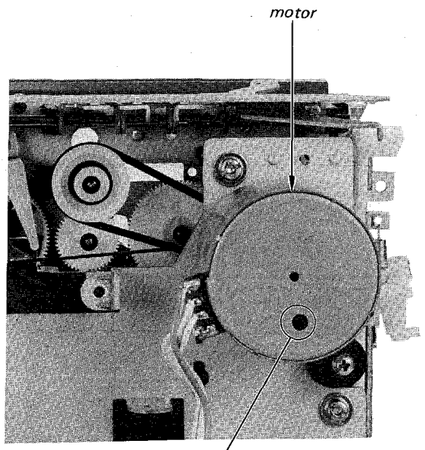


Specification:

Speed checker	Digital frequency counter
–0.8~+0.8%	2,975~3,025Hz

Frequency difference between the beginning and the end of the tape should be within 0.8% (25Hz).

Adjustment Location:

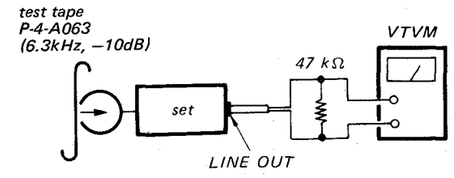


Adjust the speed by using screwdriver. When turning the screw clockwise, speed is faster.

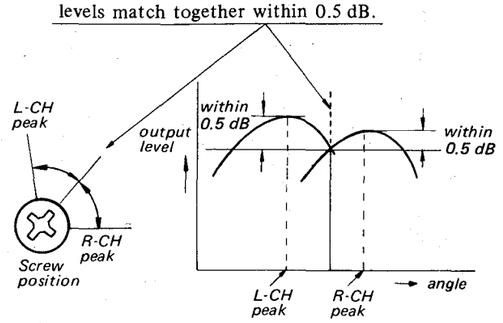
Record/playback Head Azimuth Adjustment

Procedure:

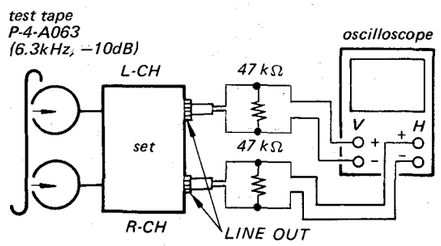
1. Mode: playback

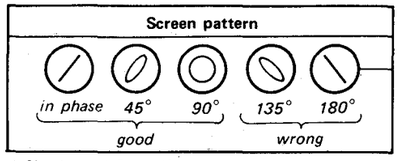


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.

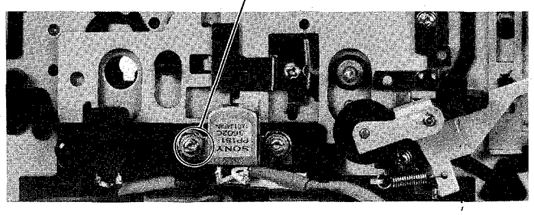


3. Phase Check
Mode: playback





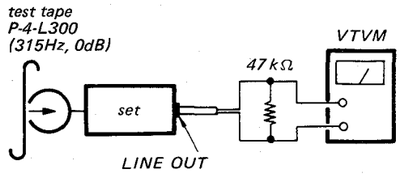
Adjustment Location:



Playback Level Adjustment

Procedure:

Mode: playback



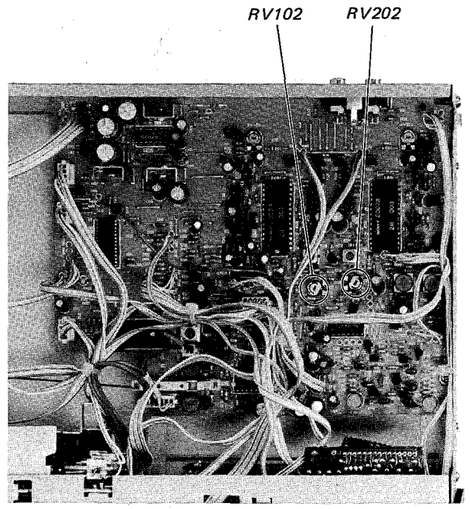
Specification:

LINE OUT level: 0.46 ~ 0.41V
(–4.5 ~ –5.5dB)
Level difference between channels:
less than 0.5 dB

Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location:

– AUDIO board –



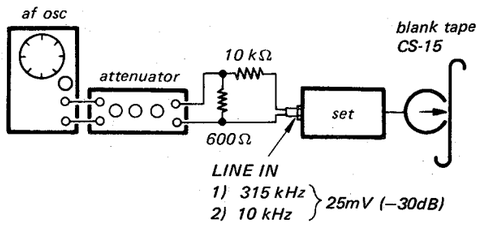
Record Bias Adjustment

Setting:

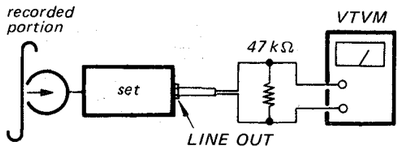
REC LEVEL control: standard record
(See page 11)

Procedure:

1. Mode: record



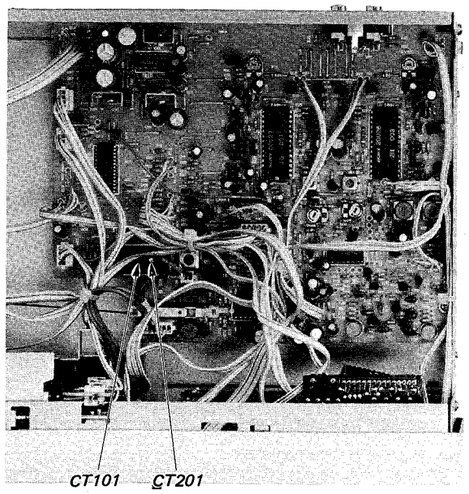
2. Mode: playback



Adjust CT101, 201 so that the LINE OUT level of 10kHz signal is 0dB ±0.5dB relative to that of 315 Hz.

Adjustment Location:

– AUDIO board –



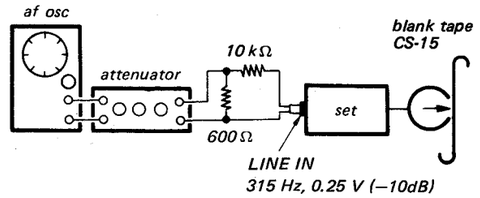
Record Level Adjustment

Setting:

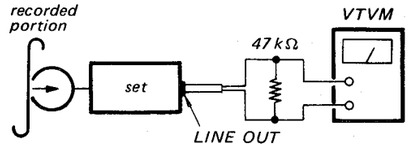
REC LEVEL control: standard record
(See page 11)

Procedure:

1. Mode: record



2. Mode: playback

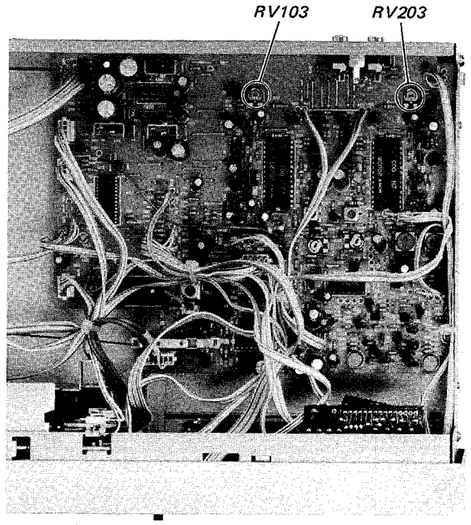


Specification:

LINE OUT level: 0.46 ~ 0.41V
(–4.5 ~ –5.5dB)

Adjustment Location:

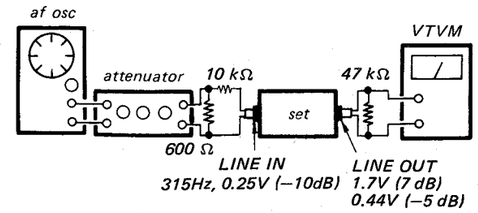
– AUDIO board –



Level Meter Calibration

Procedure:

1. Mode: record

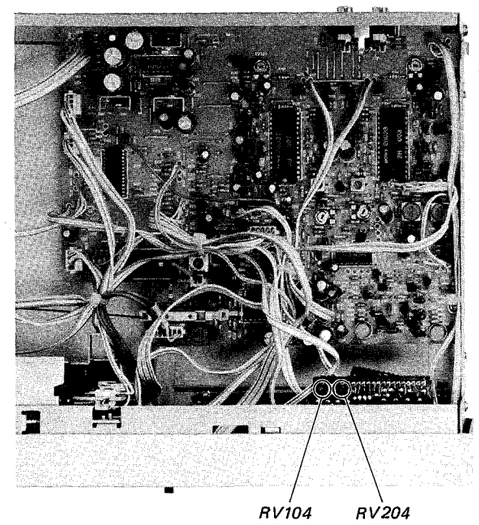


2. Set the REC LEVEL control so that the LINE OUT level is 0.44V (–5dB).
3. Adjust RV104, 204 so that the 9th segment from the right of the LED meter goes on.
4. Set the REC LEVEL control so that the LINE OUT level is 1.9V (8dB). Make sure that lights in the all segments go on.

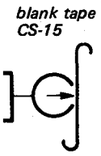
Note: Slide the REC LEVEL control rightward slowly.

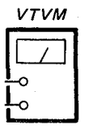
Adjustment Location:

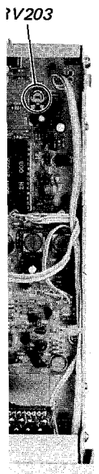
– METER DRIVE board –



ecord
11)



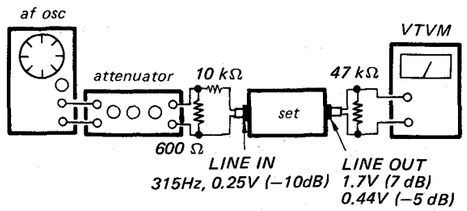




Level Meter Calibration

Procedure:

1. Mode: record

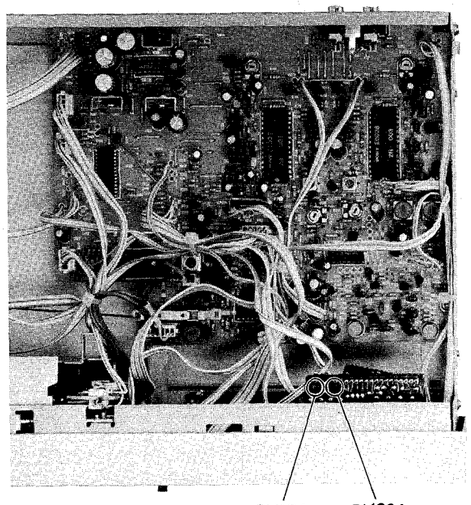


2. Set the REC LEVEL control so that the LINE OUT level is 0.44V (–5dB).
3. Adjust RV104, 204 so that the 9th segment from the right of the LED meter goes on.
4. Set the REC LEVEL control so that the LINE OUT level is 1.9V (8dB). Make sure that lights in the all segments go on.

Note: Slide the REC LEVEL control rightward slowly.

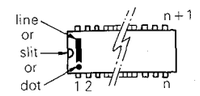
Adjustment Location:

– METER DRIVE board –



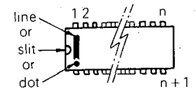
SEMICONDUCTOR LEAD LAYOUTS

CX10032
CX10034
CX10035
CX20028
TC9310N-015



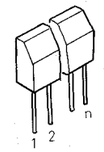
(Top view)

CX20027

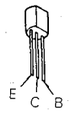


(Top view)

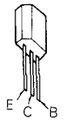
M5218L



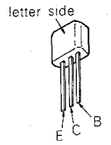
2SA733
2SC945
2SC1364
2SC2362



2SA1027R

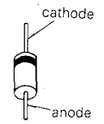


2SD1020

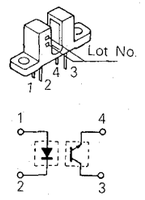


2SB731
2SD809

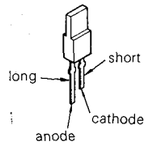
1SS133
1SS133T-72
10E2
HZ9A2L



SPI201

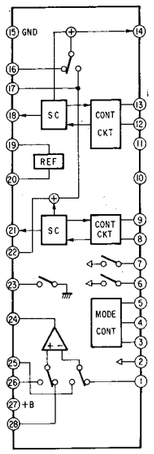


AA5532K
BG5532K
PR5532K

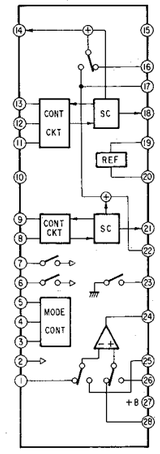


4-1. MOUNTING DIAGRAM

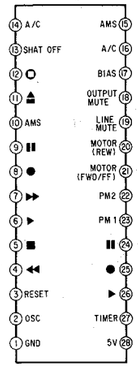
IC101



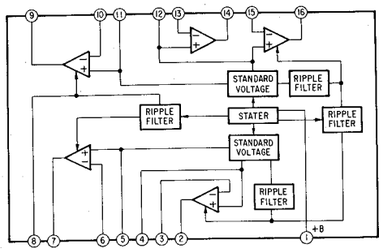
IC201



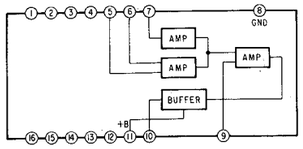
IC401



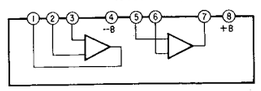
IC302



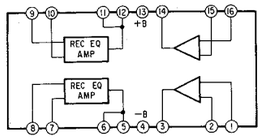
IC304



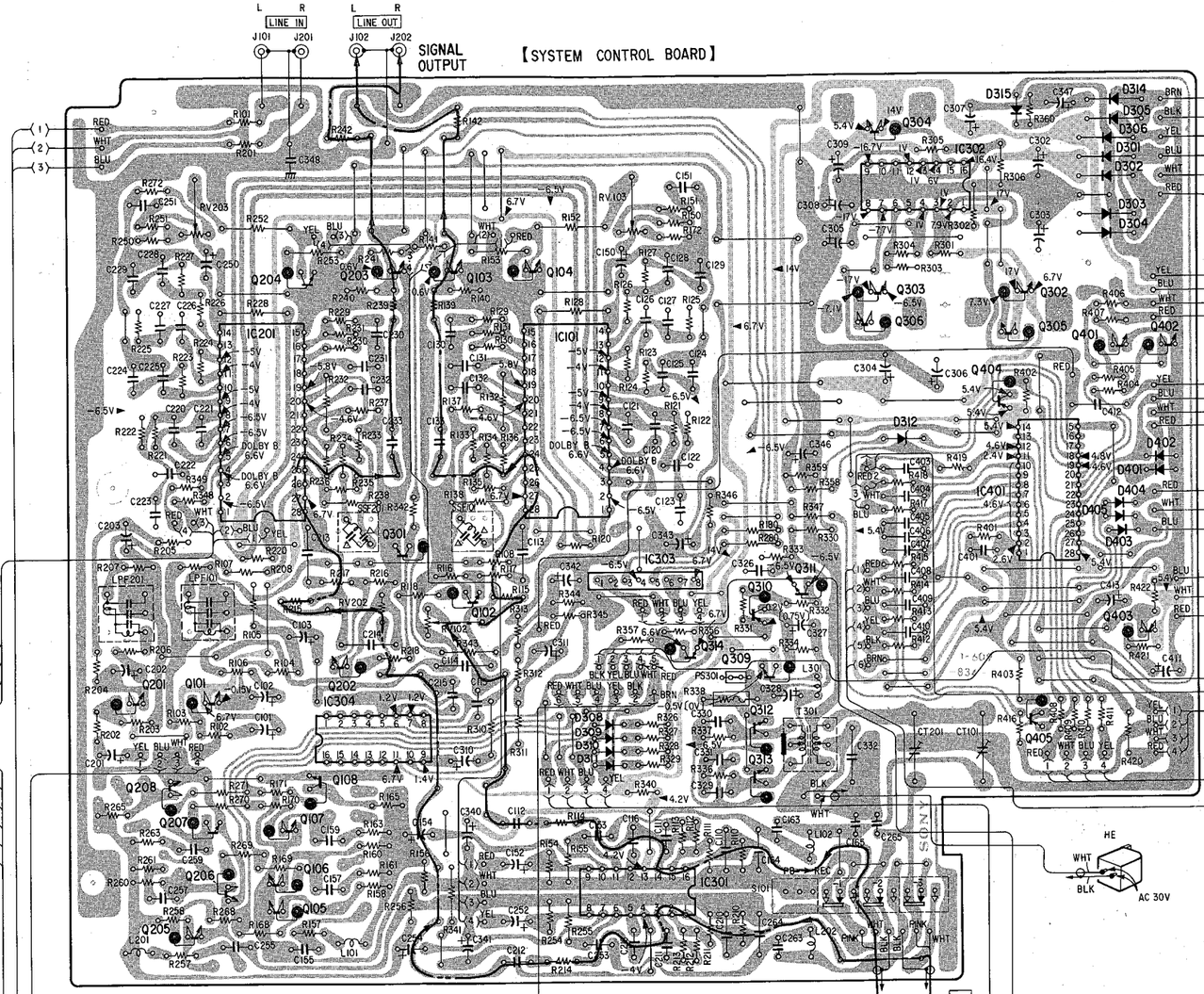
IC303



IC301



I.C Q	201 208 101 207 206 205 IC201 107 106 105 204 IC304 202 108 203 301 103 102 104 IC101 IC303 IC301 314 310 312 313 309 311 304 306 303 IC302 302 305 404 IC401 405 401 402 403
D	308 309 310 311 312 315 314 305 306 404 301 405 304 403 402 401



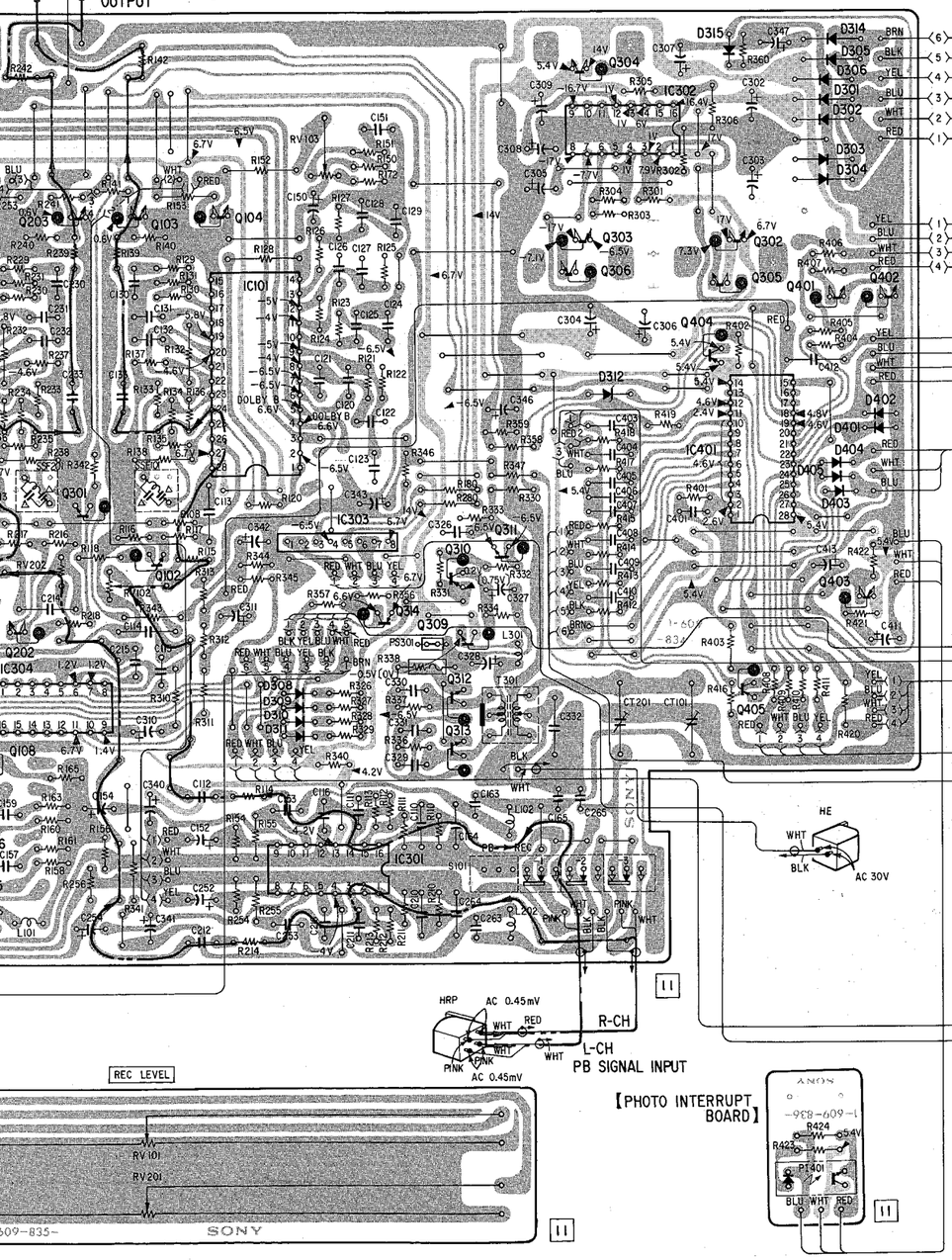
H I J K L M N O P Q R S T U V W

IC Q	202 IC304 203 301 108	103 102	104 IC101	IC303 IC301 314	310 309 311 312 313	304 306,303 IC302	302 305 404 IC401 405	401 402 403
D			308 309 310 311			312	315	314 305 306 404 301 405 304 403 402 401

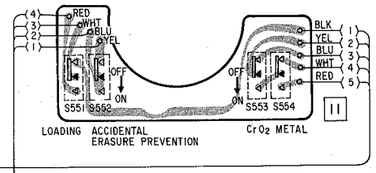
1 2 3 4 5 6 7 8 9 10

L R
LINE OUT
J102 J202
SIGNAL OUTPUT

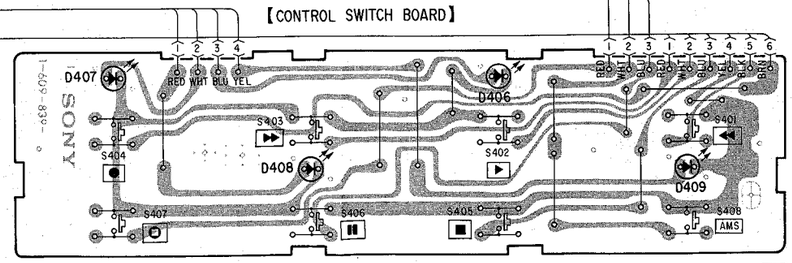
【SYSTEM CONTROL BOARD】



【TAPE SELECT SWITCH BOARD】

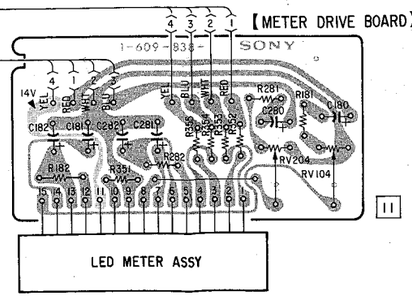


【CONTROL SWITCH BOARD】



D
407, 406
408, 409

【METER DRIVE BOARD】



【PHOTO INTERRUPT BOARD】

HRP AC 0.45mV
WHT RED
PINK WHT
PINK AC 0.45mV
R-CH
L-CH
PB SIGNAL INPUT

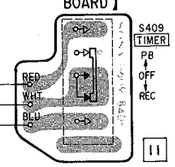
REC LEVEL

HE
WHT
BLK
AC 30V

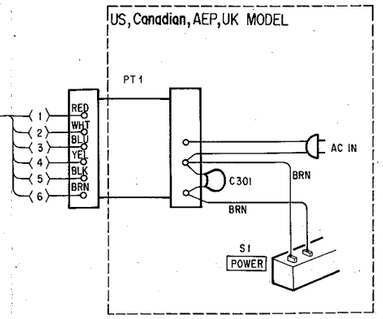
MOTOR

PM2
PM1

【TIMER SWITCH BOARD】

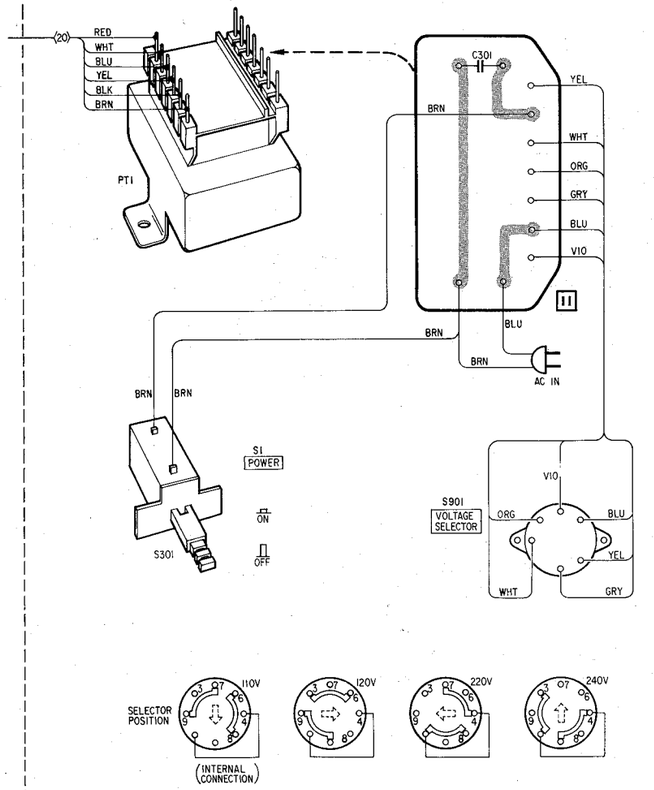


US, Canadian, AEP, UK MODEL



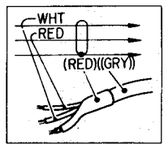
E MODEL

【POWER TRANSFORMER BOARD】



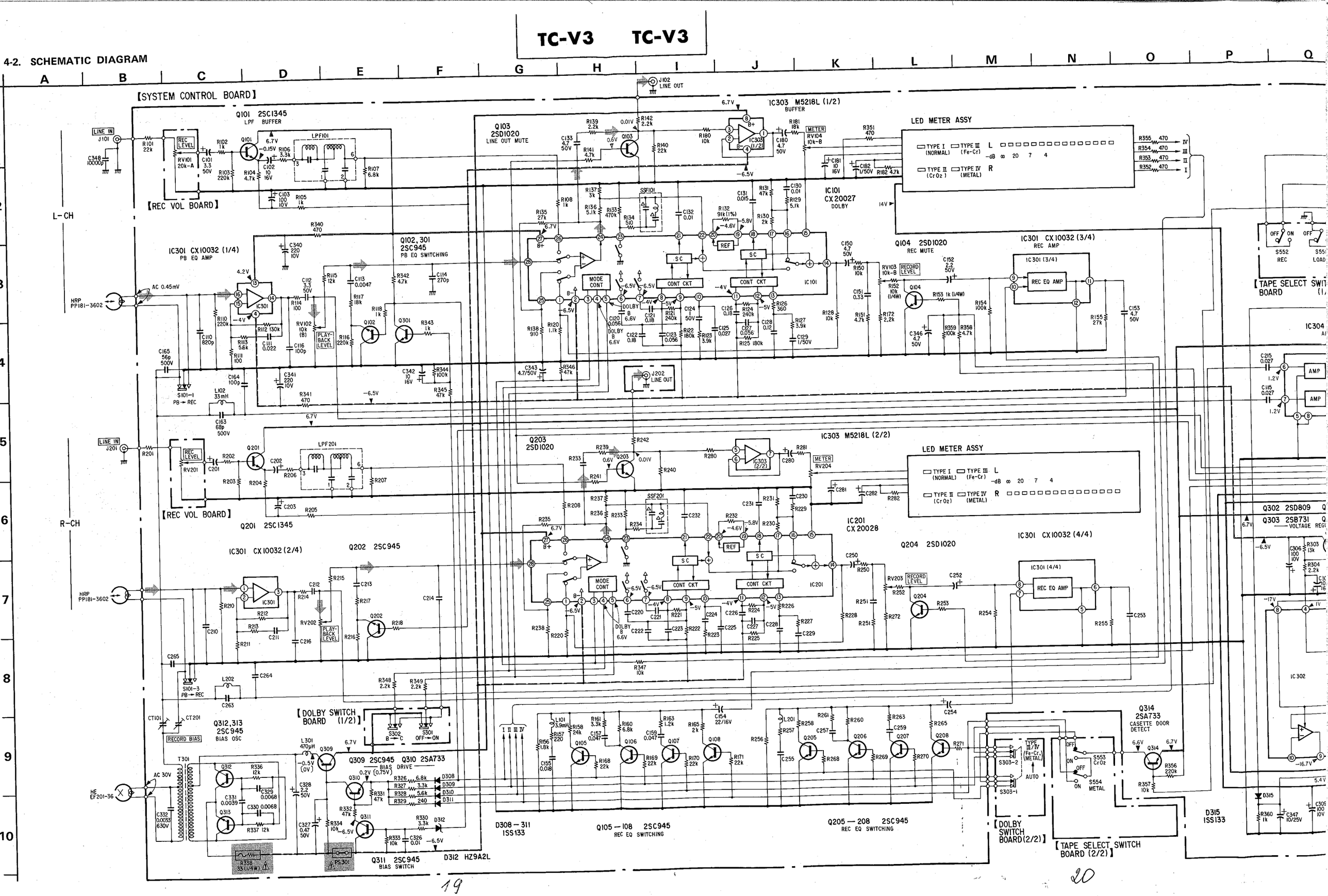
Note:

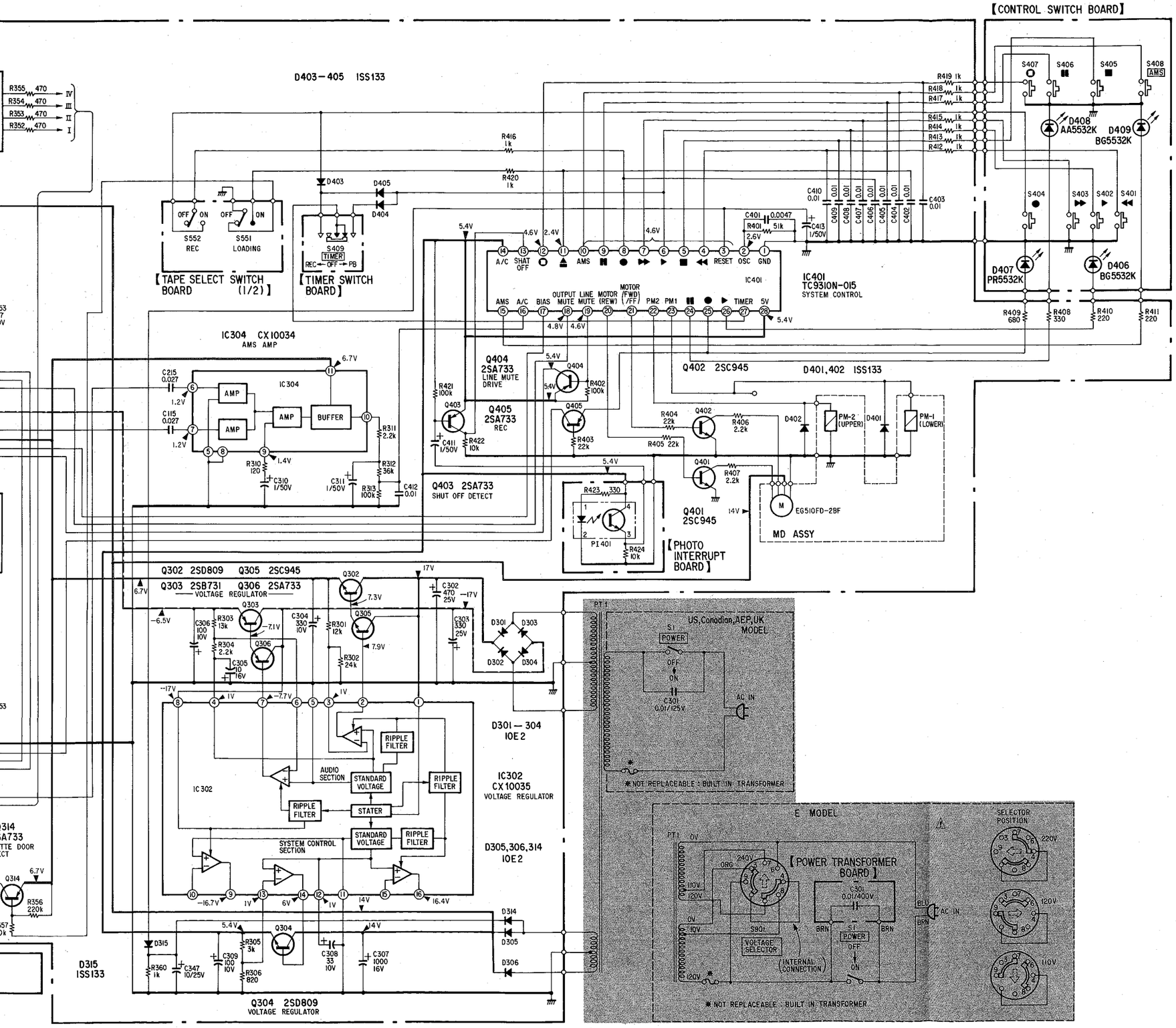
- Color code of sleeving over the end of the jacket.



- ○— : parts extracted from the component side.
- [ ]— : indicates side identified with part number.
- ▒ : B + pattern
- ▬▶▬ : signal path
- ▬▶▬ : L-CH signal path
- ▬▶▬ : R-CH signal path

4-2. SCHEMATIC DIAGRAM





Note:

- Components for right channel have same values as for left channel. Reference numbers are coded from 200.
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ⅙W unless otherwise noted. kΩ : 1000Ω, MΩ : 1000kΩ
- △ : internal component.
- ▭ : panel designation.
- ▭ : adjustment for repair.
- ——: B+ bus.
- – – –: B– bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions.
  [ ] : RECORD MODE
- Voltage variations may be noted due to normal production tolerances.
- AC voltage readings in the bias oscillator with a VTVM.
- Swtich

Ref. No.	Switch	Position
S1	POWER	OFF
S101	REC/PB	PB
S301	DOLBY	ON
S302	B/C	B
S303	TAPE	III (IV)
S401	◀◀	OFF
S402	▶	OFF
S403	▶▶	OFF
S404	●	OFF
S405	■	OFF
S406	▮▮	OFF
S407	○	OFF
S408	AMS	OFF
S409	TIMER	OFF
S551	LOAD	OFF
S552	REC	OFF
S553	CrO_2	ON
S554	METAL	ON
S901	VOLTAGE SELECTOR	240V

- ⇨ : signal path

Note: Voltages are measured with a VOM (50kΩ/V).

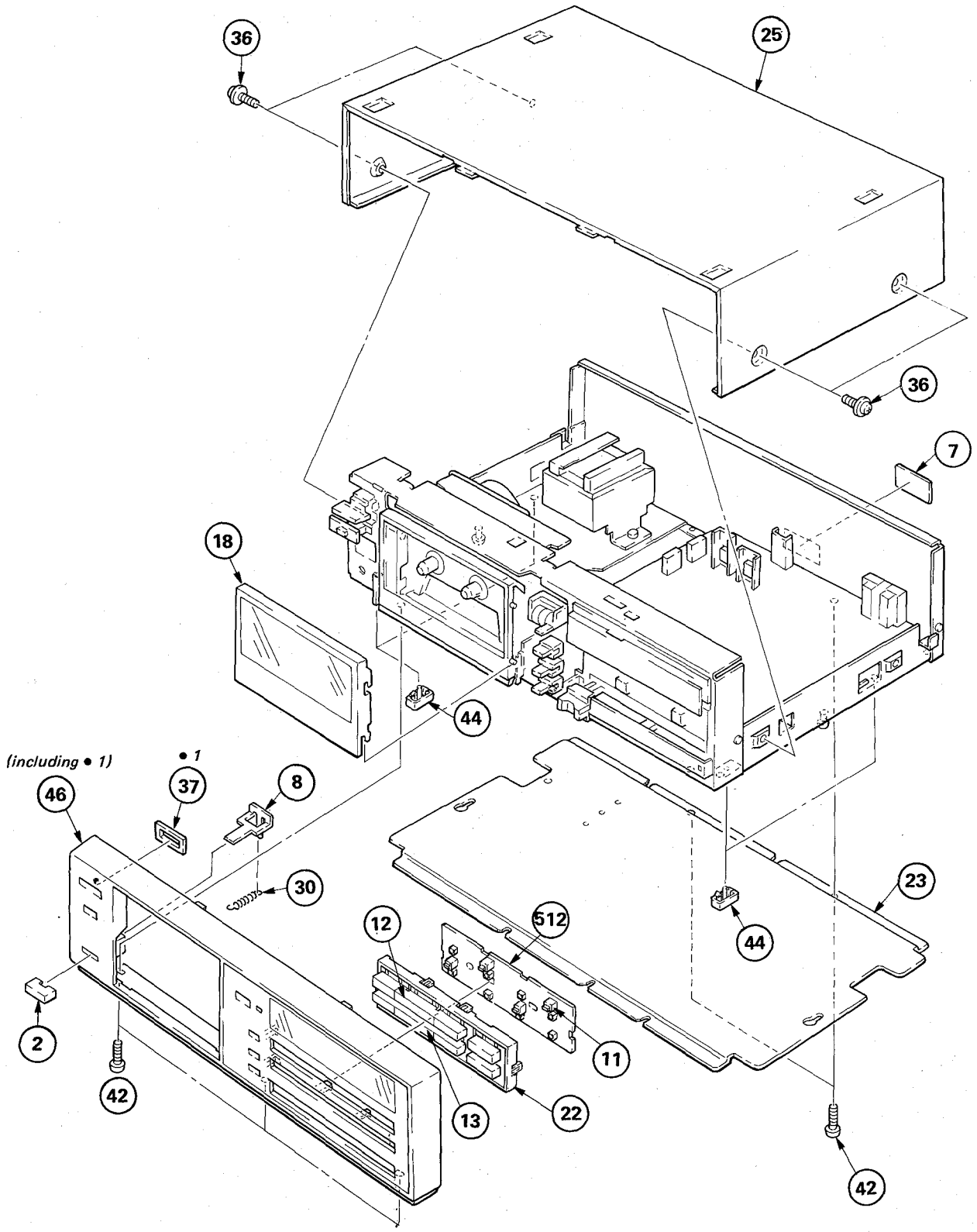
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

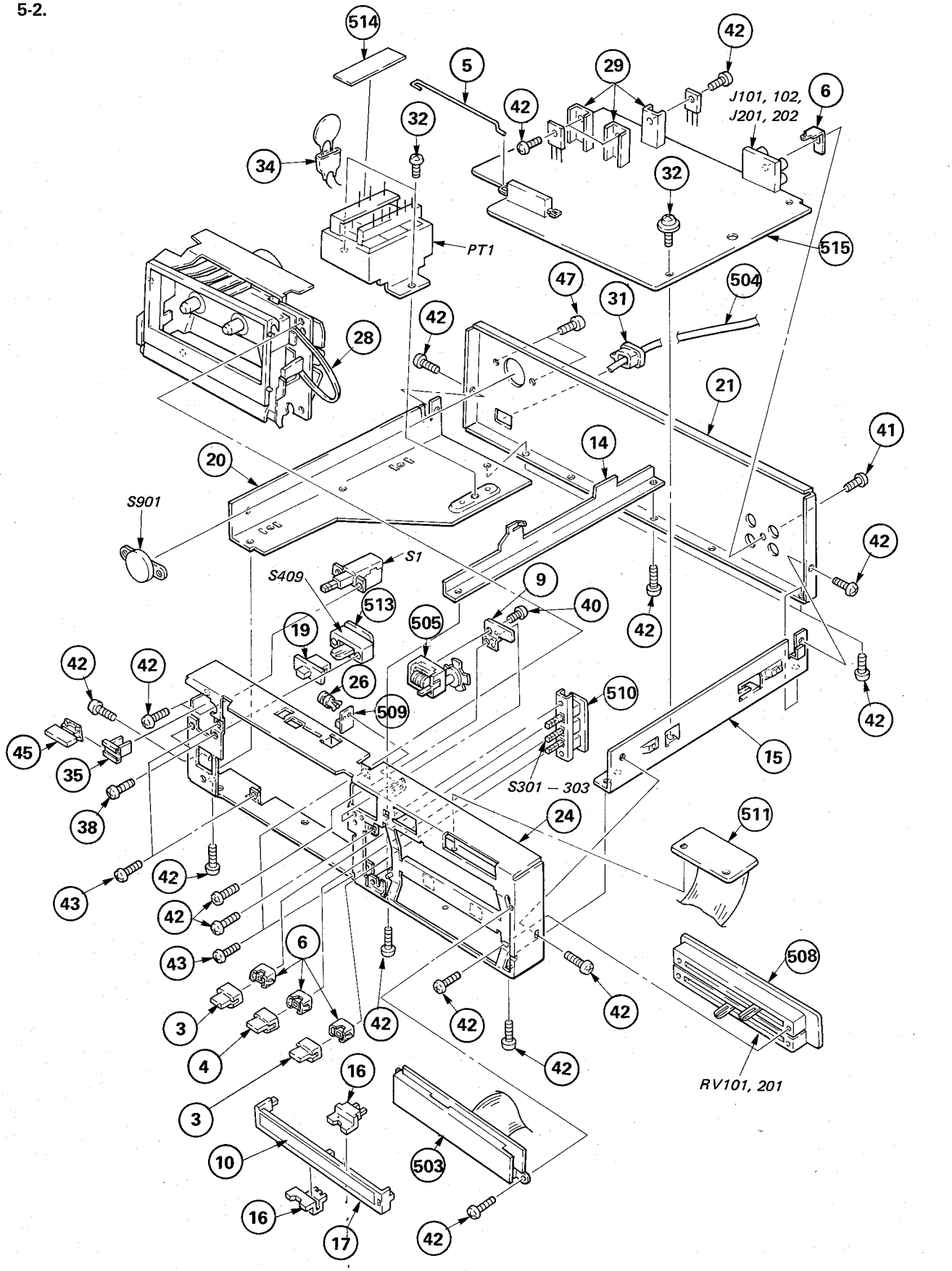
21

SECTION 5
EXPLODED VIEWS AND PARTS LIST

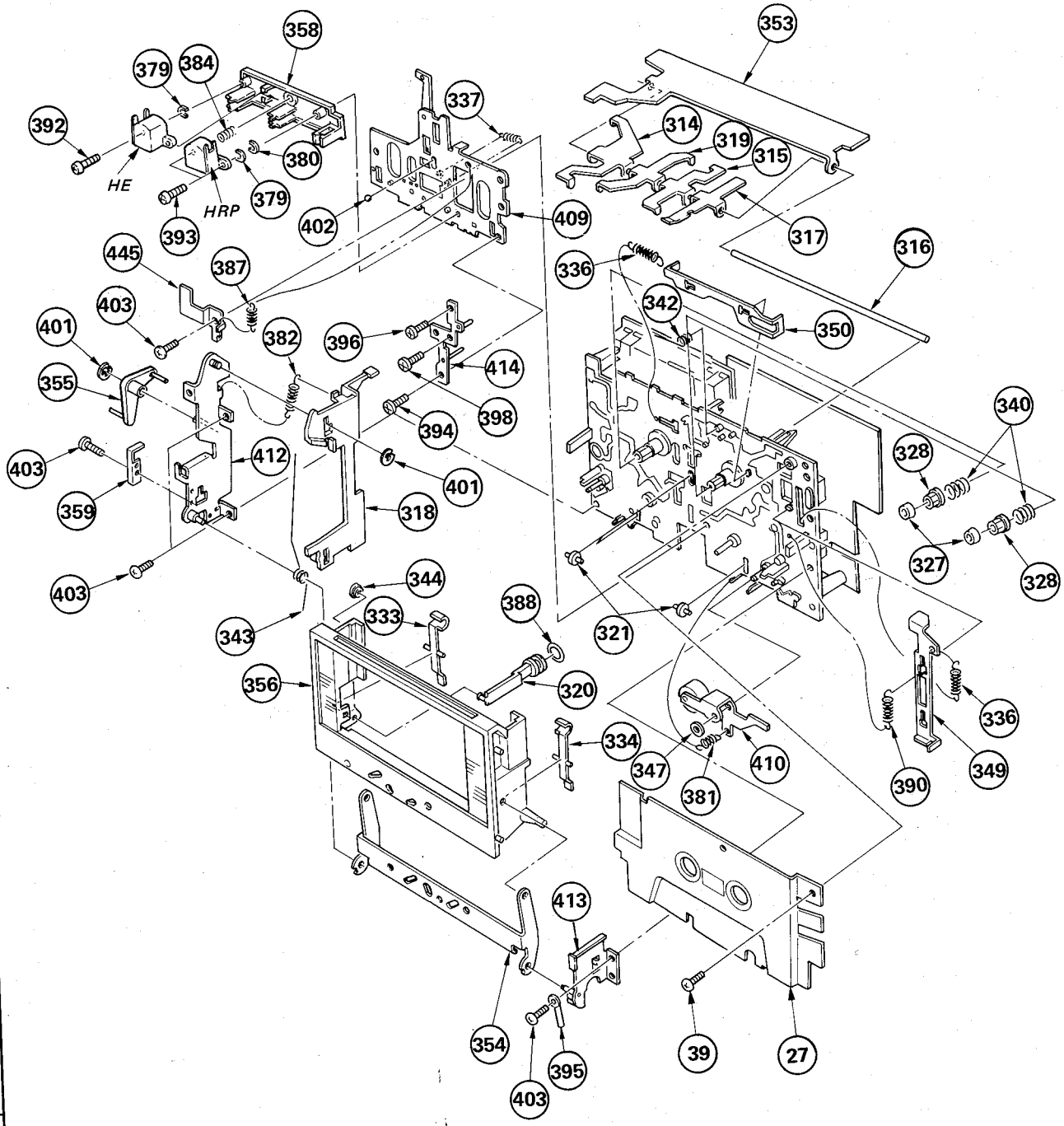
5-1.



5-2.


514
42
5
29
J101, 102,
J201, 202
6
32
42
34
32
PT1
515
47
504
31
42
28
21
41
14
20
S901
42
S1
S409
9
513
40
505
19
42
42
42
26
510
509
42
45
15
35
S301 – 303
38
24
511
43
42
42
43
6
508
3
42
42
42
4
16
RV101, 201
3
10
503
16
17
42

5-3.


358
379
384
392
HE
HRP
380
379
393
337
402
409
353
314
319
315
317
316
336
342
350
445
387
403
401
355
382
396
414
398
394
403
412
359
401
318
403
344
333
343
388
356
320
321
340
328
327
328
336
334
347
410
381
390
349
413
354
403
395
39
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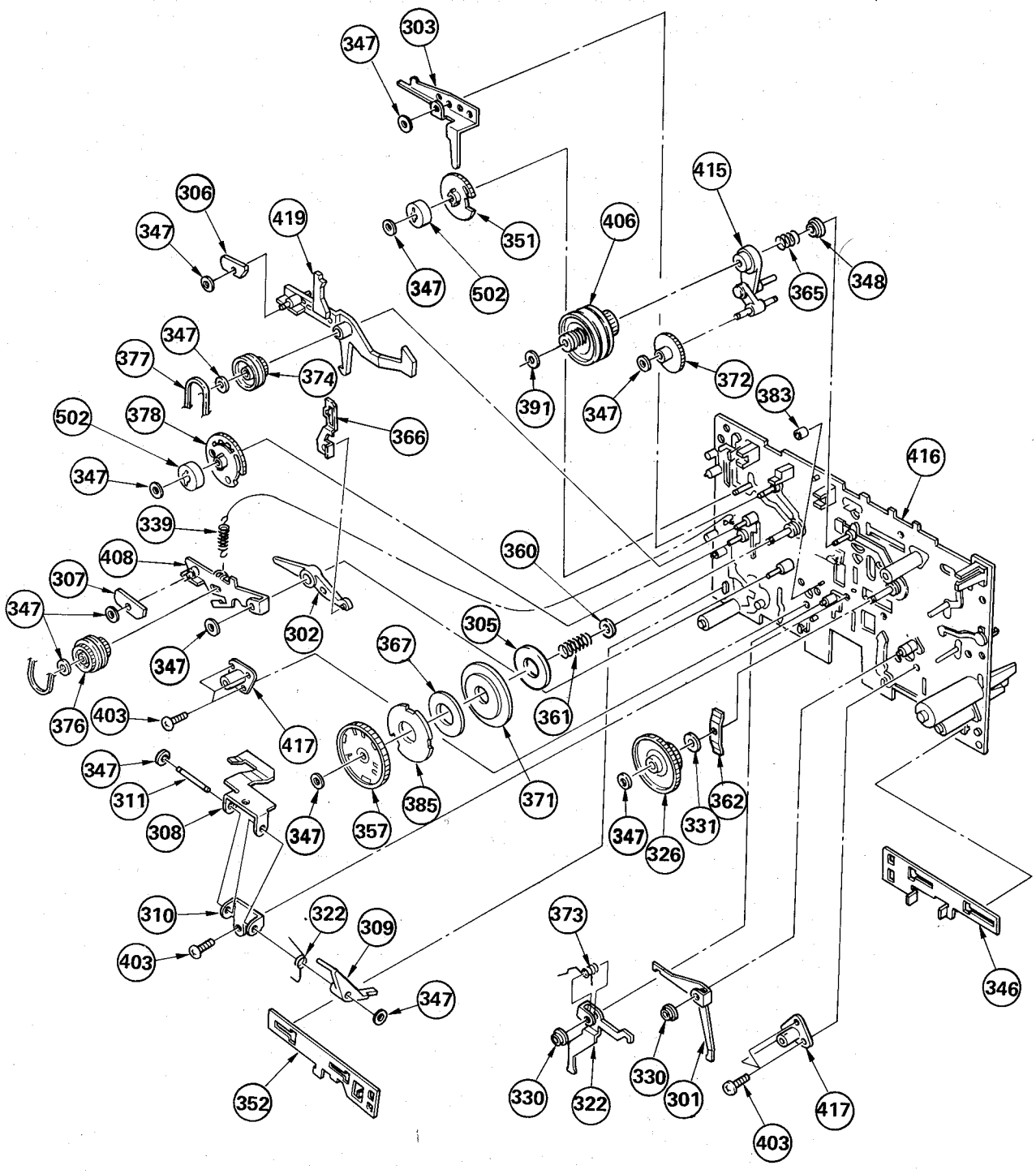
5-4.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GENERAL SECTION

No.	Part No.	Description
1 ♦	2-095-203-00	SHEET, CUSHION
2	3-304-419-00	BUTTON, EJECT
3	3-304-926-11	KNOB (A), PUSH
4	3-304-926-21	KNOB (A), PUSH
5 ♦	3-307-520-00	ROD
6 ♦	3-307-558-00	PLATE, GROUND, PIN JACK
7	3-313-202-00	(AEP).....LABEL, MODEL NUMBER
7	3-313-224-00	(E).....LABEL, MODEL NUMBER
7	3-313-225-00	(UK).....LABEL, MODEL NUMBER
7	3-313-226-00	(US,Canadian)...LABEL, MODEL NUMBER
8 ♦	3-313-203-00	PLATE, SLIDE
9 ♦	3-313-204-00	BRACKET, COUNTER
10	3-313-205-00	PLATE, ORNAMENTAL, REC CONTROL
11 ♦	3-313-206-00	GUIDE, LED
12	3-313-207-00	BUTTON (A), CONTROL
13	3-313-208-00	BUTTON (B), CONTROL
14 ♦	3-313-209-00	PLATE, RELAY
15 ♦	3-313-210-00	PLATE, SIDE, RIGHT
16	3-313-213-00	BUTTON, REC CONTROL
17 ♦	3-313-214-00	HOLDER, REC CONTROL
18	3-313-215-00	WINDOW, CASSETTE
19	3-313-216-00	KNOB, SWITCH, TIMER
20 ♦	3-313-217-00	PLATE, SIDE, LEFT
21 ♦	3-313-218-11	(E).....PLATE, JACK
21 ♦	3-313-218-31	(AEP,UK,US,Canadian)...PLATE, JACK
22	3-313-219-00	BUTTON (BLOCK), CONTROL
23 ♦	3-313-220-00	PLATE, BOTTOM
24 ♦	3-313-222-00	CHASSIS, AMPLIFIER
25	3-313-223-00	CASE
26	4-812-134-00	RIVET NYLON
27	3-313-234-00	PLATE, ORNAMENTAL, MD
28	3-530-181-XX	BELT, DETCTING
29 ♦	3-567-307-00	HEAT SINK (35)
30	3-540-244-00	SPRING, TENSION
31	3-703-244-00	BUSHING, CORD
32	3-703-249-01	SCREW, S TIGHT, +PTTWH 3X6
33	4-864-307-00	RING
34	4-875-455-00	(AEP,UK,E)...COVER (DIA. 20), CAPACITOR
35	4-875-466-00	JOINT (F2), KNOB
36	4-886-821-11	SCREW, M3 CASE
37	4-886-976-00	ESCUTCHEON, POWER KNOB
38	7-621-773-93	SCREW +B 2.6X3
39	7-685-102-29	SCREW +P 2X4 TYPE2 SLIT
40	7-685-531-19	SCREW +BTP 2.6X4 TYPE2 N-S
41	7-685-546-19	SCREW +BTP 3X8 TYPE2 N-S
42	7-685-871-01	SCREW +BVTT 3X6 (S)

GENERAL SECTION

No.	Part No.	Description
43	7-685-871-09	SCREW +BVTT 3X6 (S)
44	X-4886-405-1	FOOT ASSY
45	X-4886-805-0	KNOB (L) ASSY, POWER
46	X-3313-203-1	PANEL ASSY
47	7-682-547-01	(E)...SCREW +B 3X6

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
81	1-556-793-31	CORD, CONNECTION
82	3-307-562-00	LABEL, CAUTION, TAPE SELECT
83	3-701-630-00	BAG, POLYETHYLENE
84	3-773-357-11	(AEP,UK,E)...MANUAL, INSTRUCTION
84	3-773-357-21	(US).....MANUAL, INSTRUCTION
84	3-773-357-31	(Canadian)...MANUAL, INSTRUCTION
85	3-793-828-11	QUESTIONNAIRE
86	X-3701-105-0	ROD ASSY, CLEANING, HEAD
87	8-890-454-10	(Canadian)...TAPE (UCX-S)
88	3-313-229-00	CARTON
89	3-313-230-00	CUSHION
90	3-313-231-00	CUSHION
91	3-313-232-00	CUSHION
92	3-313-233-00	CUSHION
93	3-319-970-00	SHEET PROTECTION

NOTE:
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- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:
- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

COILS
- MMH : mH, UH : μH

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SEMICONDUCTORS
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

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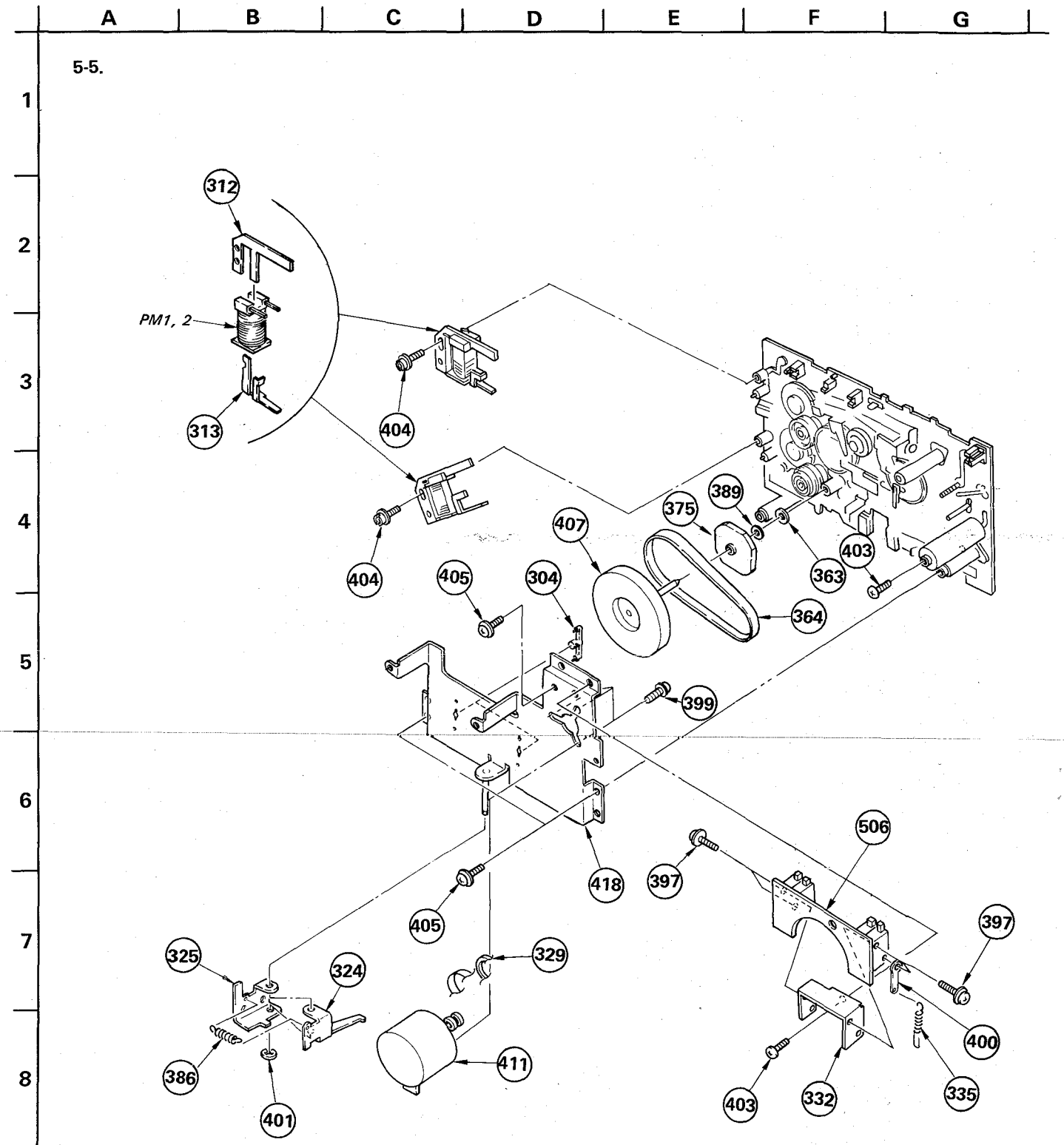
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MECHANISM SECTION

No.	Part No.	Description
386	3-564-736-00	SPRING, TENSION
387	3-570-895-00	SPRING, TENSION
388	3-575-392-00	RING, PISTON
389	3-701-438-11	WASHER, 2.5
390	3-312-432-11	SPRING, COMPRESSION
391	3-701-444-01	WASHER, 6
392	3-701-465-00	SCREW, LOCK
393	3-701-466-00	SCREW, LOCK
394	3-701-467-00	SCREW, LOCK
395 ♦	3-701-822-00	HOLDER, WIRE
396	7-621-555-35	SCREW +K 2X5
397	7-621-760-05	+PSW, 2.6X16
398	7-621-772-00	SCREW +B 2X3
399	7-621-775-00	SCREW +B 2.6X3
400	7-623-507-01	LUG, 2.6
401	7-624-105-04	STOP RING 2.3, TYPE -E
402	7-671-111-11	STEEL, BOUL 1.5MM
403	7-685-860-04	SCREW +BVTT 2.6X4 (S)
404	7-687-204-21	TOTSU PTPWH 2X6 NON-SLIT, TYPE2
405	7-687-246-21	SCREW, TOTSU PTPWH 3X8, TYPE2
406	A-2142-022-A	PULLEY ASSY, FR
407	X-3307-302-5	FLYWHEEL (N) ASSY
408 ♦	X-3307-305-0	LEVER ASSY, FWD LOCK
409	X-3307-306-0	CHASSIS (N) ASSY, HEAD
410	X-3307-307-5	PINCH ROLLER (N) ASSY
411	X-3307-308-3	MOTOR (N) ASSY
412 ♦	X-3307-309-0	PLATE (LEFT) ASSY, SIDE
413 ♦	X-3307-310-0	PLATE (RIGHT) ASSY, SIDE
414	X-3307-920-0	PLATE ASSY (AMS), ADJUSTMENT
415	X-3307-312-0	LEVER ASSY, FR
416	X-3307-330-1	CHASSIS, MECHANICAL
417	X-3307-338-0	BEARING ASSY, CAPSTAN
418 ♦	X-3307-345-0	RETAINER ASSY (B), THRUST
419	X-3307-348-0	LEVER ASSY, FF LOCK

ELECTRICAL PARTS

Ref.No.	Part No.	Description		
501	.....			
502	1-452-202-00	MAGNET		
503	1-520-458-00	METER, LEVEL (LED INDICATION)		
504 ⚠	1-534-817-XX	(AEP).....CORD, POWER, EULO PLUG		
504 ⚠	1-551-479-00	(E).....CORD, POWER		
504 ⚠	1-551-506-XX	(US,Canadian)...CORD, POWER		
504 ⚠	1-551-884-00	(UK).....CORD, POWER		
505	1-548-563-41	COUNTER, TAPE		
506 ♦	1-608-169-00	PC BOARD, TAPE SELECT SWITCH		
507 ♦	1-609-834-00	PC BOARD, AUDIO SYSTEM CONTROL		
508 ♦	1-609-835-00	PC BOARD, REC VOL		
509 ♦	1-609-836-00	PC BOARD, PHOTO INTERRUPT		
510 ♦	1-609-837-00	PC BOARD, DOLBY SW		
511 ♦	1-609-838-00	PC BOARD, METER DRIVE		
512 ♦	1-609-839-00	PC BOARD, CONTROL SW		
513 ♦	1-609-840-00	PC BOARD, TIMER SW		
514	1-605-860-00	(E)...PC BOARD, POWER		
515 ♦	A-2056-198-A	PC BOARD ASSY, AUDIO		
C101	1-123-354-00	ELECT	3.3MF	20% 50V
C102	1-123-356-00	ELECT	10MF	20% 16V
C103	1-123-307-00	ELECT	100MF	20% 10V
C110	1-102-117-00	CERAMIC	820PF	10% 50V
C111	1-130-624-00	FILM	0.022MF	5% 50V
C112	1-123-231-00	ELECT	3.3MF	20% 50V
C113	1-161-377-00	CERAMIC	0.0047MF	20% 50V
C114	1-102-111-00	CERAMIC	270PF	10% 50V
C115	1-130-625-00	FILM	0.027MF	5% 50V
C116	1-162-037-00	CERAMIC	100PF	10% 50V
C120	1-130-629-00	FILM	0.056MF	5% 50V
C121	1-130-635-00	FILM	0.18MF	5% 50V
C122	1-130-635-00	FILM	0.18MF	5% 50V
C123	1-130-629-00	FILM	0.056MF	5% 50V
C124	1-123-228-00	ELECT	1MF	20% 50V
C125	1-130-625-00	FILM	0.027MF	5% 50V
C126	1-130-635-00	FILM	0.18MF	5% 50V
C127	1-130-629-00	FILM	0.056MF	5% 50V
C128	1-130-633-00	FILM	0.12MF	5% 50V
C129	1-123-228-00	ELECT	1MF	20% 50V
C130	1-130-620-00	FILM	0.01MF	5% 50V
C131	1-130-622-00	FILM	0.015MF	5% 50V
C132	1-130-620-00	FILM	0.01MF	5% 50V
C133	1-123-232-00	ELECT	4.7MF	20% 50V
C150	1-123-369-00	ELECT	4.7MF	20% 50V
C151	1-130-638-00	FILM	0.33MF	5% 50V
C152	1-123-353-00	ELECT	2.2MF	20% 50V
C153	1-123-232-00	ELECT	4.7MF	20% 50V

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MECHANISM SECTION

No.	Part No.	Description
301	♦;3-307-306-00	LEVER, SELECT, REVERSE
302	3-307-307-00	LEVER, FWD
303	♦;3-307-308-00	LEVER, FF
304	3-307-309-00	RETAINER (A), THRUST
305	3-307-313-00	PLATE, YOKE
306	3-307-315-00	ARBOR, MOVABLE
307	3-307-315-01	ARBOR, MOVABLE
308	3-307-319-00	RETAINER, TAKE-UP GEAR
309	3-307-328-00	LEVER, TAKE-UP SELECTION
310	♦;3-307-329-00	PLATE, FULCRUM, SELECTION LEVER
311	3-307-330-00	PIN, FULCRUM PLATE
312	3-307-332-00	ARBOR, FIXED
313	3-307-333-00	ARBOR, TRIGGER
314	♦;3-307-337-00	LEVER, REC DETECTION
315	♦;3-307-338-00	LEVER, METAL DETECTION
316	♦;3-307-339-00	SHAFT, DETECTION LEVER
317	♦;3-307-344-00	LEVER, HALF RETAINER
318	3-307-345-00	SLIDER, EJECT
319	♦;3-307-346-00	LEVER, DETECTION
320	3-307-347-00	PISTON
321	3-307-348-00	ROLLER
322	♦;3-307-349-00	LEVER (M), FWD SELECT
323	3-307-355-00	SPRING
324	♦;3-307-356-00	LEVER, REC
325	♦;3-307-357-00	LEVER, REC LIMITER
326	3-307-360-00	GEAR (S), REEL
327	3-307-362-00	CAP, REEL
328	3-307-363-00	CLAW (N), REEL
329	3-307-366-00	BELT, FAST FORWARD
330	3-307-367-00	BUSHING, SELECT LEVER
331	3-307-369-00	FELT, LIMITER
332	♦;3-307-370-00	BRACKET, SWITCH
333	3-307-371-00	SPRING (LEFT)
334	3-307-372-00	SPRING (RIGHT)
335	3-307-373-00	SPRING, TENSION
336	3-307-374-00	SPRING, TENSION
337	3-307-375-00	SPRING, TENSION
338	.....	
339	3-307-378-00	SPRING, TENSION
340	3-307-380-00	SPRING, COMPRESSION
341	.....	
342	3-307-382-00	SPRING
343	3-307-383-00	SPRING
344	3-307-390-00	BUSHING, LOADING SPRING
345	3-307-391-00	SPRING

MECHANISM SECTION

No.	Part No.	Description
346	♦;3-307-392-00	SLIDER, REC
347	3-307-394-00	RETAINER (B), THRUST
348	3-307-395-00	RETAINER, SPRING
349	3-307-397-00	SLIDER, PAUSE
350	♦;3-307-399-00	SLIDER, MODE
351	3-307-401-00	GEAR, FF CAM
352	♦;3-307-403-04	SLIDER, FWD
353	♦;3-307-404-00	RETAINER, DETECTION SWITCH
354	♦;3-307-405-00	PLATE, FULCRUM, CASSETTE HOLDER
355	3-307-406-00	LEVER, EJECT
356	3-307-407-00	HOLDER, CASSETTE
357	3-307-412-00	GEAR, TAKE-UP REEL
358	3-307-414-00	BRACKET, HEAD
359	3-307-416-00	STOPPER, LOADING
360	♦;3-307-467-00	RETAINER, SPRING
361	3-307-471-00	SPRING, COMPRESSION
362	3-307-475-00	PLATE, TENSION, BACK
363	3-307-482-00	WASHER, LUMILER
364	3-307-483-00	BELT (R), CAPSTAN
365	3-307-486-00	SPRING, COMPRESSION
366	♦;3-307-487-03	STOPPER, FR
367	3-307-493-01	SPACER (t=0.1)
367	3-307-493-11	SPACER (t=0.15)
367	3-307-493-21	SPACER (t=0.2)
367	3-307-493-31	SPACER (t=0.25)
367	3-307-493-41	SPACER (t=0.3)
367	3-307-493-51	SPACER (t=0.35)
368	.....	
369	.....	
370	.....	
371	3-307-953-00	MAGNET, REEL TABLE
372	3-307-970-00	GEAR, FR
373	3-307-983-11	SPRING
374	3-312-405-00	PULLEY, DRIVING
375	3-312-406-00	GEAR (T), PINION
376	3-312-408-00	GEAR (B), CONVERSION
377	3-312-409-00	BELT, DRIVING
378	3-312-412-00	GEAR (B), CAM, FWD
379	3-513-237-01	PLATE
380	3-513-237-11	PLATE
381	3-312-432-00	SPRING, COMPRESSION
382	3-531-541-00	SPRING, TENSION
383	3-538-051-00	RUBBER, BRAKE
384	3-539-237-00	SPRING (3), COMPRESSION
385	3-561-827-11	PLATE (A), HYSTERESIS

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COILS
- MMH : mH, UH : μH

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SEMICONDUCTORS
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	Description
J101	1-507-762-00	JACK, PIN 4P
J102	1-507-762-00	JACK, PIN 4P
J201	1-507-762-00	JACK, PIN 4P
J202	1-507-762-00	JACK, PIN 4P
L101	1-408-214-00	MICRO INDUCTOR 3.9MMH
L102	1-407-879-00	MICRO INDUCTOR 33MMH
L201	1-408-214-00	MICRO INDUCTOR 3.9MMH
L202	1-407-879-00	MICRO INDUCTOR 33MMH
L301	1-407-177-XX	MICRO INDUCTOR 470UH
LPF101	1-231-388-31	FILTER, LOW PASS
LPF201	1-231-388-31	FILTER, LOW PASS
M1	1-541-201-00	MOTOR
PI401	8-719-902-01	PHOTO INTERRUPTOR SPI201-20
PM1	1-454-316-00	SOLENOID
PM2	1-454-316-00	SOLENOID, PLUNGER
PS301 ⚠	1-532-605-00	PROTECTCR, CIRCUIT
PT1 ⚠	1-447-356-00	(US,Canadian)...TRANSFORMER, POWER
PT1 ⚠	1-447-357-00	(E).....TRANSFORMER, POWER
PT1 ⚠	1-447-358-00	(AEP,UK).....TRANSFORMER, POWER
Q101	8-729-823-64	TRANSISTOR 2SC2362
Q102	8-729-663-47	TRANSISTOR 2SC1364
Q103	8-729-102-03	TRANSISTOR 2SD1020
Q104	8-729-102-03	TRANSISTOR 2SD1020
Q105	8-729-663-47	TRANSISTOR 2SC1364
Q106	8-729-663-47	TRANSISTOR 2SC1364
Q107	8-729-663-47	TRANSISTOR 2SC1364
Q108	8-729-663-47	TRANSISTOR 2SC1364
Q201	8-729-823-64	TRANSISTOR 2SC2362
Q202	8-729-663-47	TRANSISTOR 2SC1364
Q203	8-729-102-03	TRANSISTOR 2SD1020
Q204	8-729-102-03	TRANSISTOR 2SD1020
Q205	8-729-663-47	TRANSISTOR 2SC1364
Q206	8-729-663-47	TRANSISTOR 2SC1364
Q207	8-729-663-47	TRANSISTOR 2SC1364
Q208	8-729-663-47	TRANSISTOR 2SC1364
Q301	8-729-663-47	TRANSISTOR 2SC1364
Q302	8-729-180-93	TRANSISTOR 2SD809
Q303	8-729-173-13	TRANSISTOR 2SB731
Q304	8-729-180-93	TRANSISTOR 2SD809
Q305	8-729-663-47	TRANSISTOR 2SC1364
Q306	8-729-612-77	TRANSISTOR 2SA1027R
Q309	8-729-663-47	TRANSISTOR 2SC1364
Q310	8-729-612-77	TRANSISTOR 2SA1027R

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
Q311	8-729-663-47	TRANSISTOR 2SC1364			
Q312	8-729-663-47	TRANSISTOR 2SC1364			
Q313	8-729-663-47	TRANSISTOR 2SC1364			
Q314	8-729-612-77	TRANSISTOR 2SA1027R			
Q401	8-729-663-47	TRANSISTOR 2SC1364			
Q402	8-729-663-47	TRANSISTOR 2SC1364			
Q403	8-729-612-77	TRANSISTOR 2SA1027R			
Q404	8-729-612-77	TRANSISTOR 2SA1027R			
Q405	8-729-612-77	TRANSISTOR 2SA1027R			
R101	1-247-863-00	CARBON	22K	5%	1/6W
R102	1-247-831-00	CARBON	1K	5%	1/6W
R103	1-247-887-00	CARBON	220K	5%	1/6W
R104	1-247-847-00	CARBON	4.7K	5%	1/6W
R105	1-247-831-00	CARBON	1K	5%	1/6W
R106	1-247-843-00	CARBON	3.3K	5%	1/6W
R107	1-247-851-00	CARBON	6.8K	5%	1/6W
R108	1-247-831-00	CARBON	1K	5%	1/6W
R110	1-247-887-00	CARBON	220K	5%	1/6W
R111	1-247-807-00	CARBON	100	5%	1/6W
R112	1-247-882-00	CARBON	130K	5%	1/6W
R113	1-247-849-00	CARBON	5.6K	5%	1/6W
R114	1-247-807-00	CARBON	100	5%	1/6W
R115	1-247-857-00	CARBON	12K	5%	1/6W
R116	1-247-887-00	CARBON	220K	5%	1/6W
R117	1-247-861-00	CARBON	18K	5%	1/6W
R118	1-247-831-00	CARBON	1K	5%	1/6W
R120	1-247-832-00	CARBON	1.1K	5%	1/6W
R121	1-247-888-00	CARBON	240K	5%	1/6W
R122	1-247-885-00	CARBON	180K	5%	1/6W
R123	1-247-845-00	CARBON	3.9K	5%	1/6W
R124	1-247-888-00	CARBON	240K	5%	1/6W
R125	1-247-885-00	CARBON	180K	5%	1/6W
R126	1-247-820-00	CARBON	360	5%	1/6W
R127	1-247-845-00	CARBON	3.9K	5%	1/6W
R128	1-246-497-00	CARBON	10K	5%	1/4W
R129	1-247-848-00	CARBON	5.1K	5%	1/6W
R130	1-247-838-00	CARBON	2K	5%	1/6W
R131	1-247-871-00	CARBON	47K	5%	1/6W
R132	1-214-776-00	METAL	91K	1%	1/4W
R133	1-247-895-00	CARBON	470K	5%	1/6W
R134	1-247-824-00	CARBON	510	5%	1/6W
R135	1-247-865-00	CARBON	27K	5%	1/6W
R136	1-247-848-00	CARBON	5.1K	5%	1/6W
R137	1-247-842-00	CARBON	3K	5%	1/6W
R138	1-246-472-00	CARBON	910	5%	1/4W

NOTE:
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- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:
- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

COILS
- MMH : mH, UH : μH

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SEMICONDUCTORS
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C154	1-123-317-00	ELECT	22MF	20%	16V
C155	1-130-623-00	FILM	0.018MF	5%	50V
C157	1-130-628-00	FILM	0.047MF	5%	50V
C159	1-130-628-00	FILM	0.047MF	5%	50V
C163	1-107-036-00	MICA	68PF	5%	500V
C164	1-162-105-11	CERAMIC	390PF	5%	50V
C165	1-107-165-00	MICA	56PF	5%	500V
C180	1-123-369-00	ELECT	4.7MF	20%	50V
C181	1-123-356-00	ELECT	10MF	20%	16V
C182	1-123-380-00	ELECT	1MF	20%	50V
C301⚠	1-161-744-00	(AEP,UK,E).....CAP, CERAMIC	10000PF		
C301⚠	1-161-749-00	(US,Canadian)...CAP, CERAMIC	10000PF		
C302	1-123-336-00	ELECT	470MF	20%	25V
C303	1-123-335-00	ELECT	330MF	20%	25V
C304	1-123-309-00	ELECT	330MF	20%	10V
C305	1-123-356-00	ELECT	10MF	20%	16V
C306	1-123-307-00	ELECT	100MF	20%	10V
C307	1-123-324-00	ELECT	1000MF	20%	16V
C308	1-123-305-00	ELECT	33MF	20%	10V
C309	1-123-307-00	ELECT	100MF	20%	10V
C310	1-123-380-00	ELECT	1MF	20%	50V
C311	1-123-380-00	ELECT	1MF	20%	50V
C326	1-130-620-00	FILM	0.01MF	5%	50V
C327	1-123-351-00	ELECT	0.47MF	20%	50V
C328	1-124-089-00	ELECT	2.2MF	20%	50V
C329	1-130-293-00	FILM	0.0068MF	5%	100V
C330	1-130-293-00	FILM	0.0068MF	5%	100V
C331	1-130-287-00	FILM	0.0039MF	5%	100V
C332	1-129-708-00	FILM	0.0033MF	10%	630V
C340	1-123-308-00	ELECT	220MF	20%	10V
C341	1-123-308-00	ELECT	220MF	20%	10V
C342	1-123-356-00	ELECT	10MF	20%	16V
C343	1-123-369-00	ELECT	4.7MF	20%	50V
C346	1-123-369-00	ELECT	4.7MF	20%	50V
C347	1-123-356-00	ELECT	10MF	20%	25V
C348	1-161-330-	CERAMIC	0.01MF	30%	25V
C401	1-108-571-00	MYLAR	0.0047MF	5%	50V
C402	1-162-113-00	CERAMIC	0.01MF	30%	16V
C403	1-162-113-00	CERAMIC	0.01MF	30%	16V
C404	1-162-113-00	CERAMIC	0.01MF	30%	16V
C405	1-162-113-00	CERAMIC	0.01MF	30%	16V
C406	1-162-113-00	CERAMIC	0.01MF	30%	16V
C407	1-162-113-00	CERAMIC	0.01MF	30%	16V
C408	1-162-113-00	CERAMIC	0.01MF	30%	16V
C409	1-162-113-00	CERAMIC	0.01MF	30%	16V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C410	1-162-113-00	CERAMIC	0.01MF	30%	16V
C411	1-123-380-00	ELECT	1MF	20%	50V
C412	1-162-113-00	CERAMIC	0.01MF	30%	16V
C413	1-123-380-00	ELECT	1MF	20%	50V
♦CNP301	1-560-064-00	PIN, CONNECTOR 6P			
♦CNP302	1-560-060-00	PIN, CONNECTOR 2P			
♦CNP303	1-560-063-00	PIN, CONNECTOR 5P			
♦CNP401	1-560-062-00	PIN, CONNECTOR 4P			
♦CNP402	1-560-062-21	PIN, CONNECTOR 4P			
♦CNP403	1-560-062-31	PIN, CONNECTOR 4P			
CT101	1-141-225-21	CAP, TUNING, TRIMAR			
CT201	1-141-225-21	CAP, TUNING, TRIMAR			
D301	8-719-200-02	DIODE 10E-2			
D302	8-719-200-02	DIODE 10E-2			
D303	8-719-200-02	DIODE 10E-2			
D304	8-719-200-02	DIODE 10E-2			
D305	8-719-200-02	DIODE 10E-2			
D306	8-719-200-02	DIODE 10E-2			
D308	8-719-901-33	DIODE 1SS133			
D309	8-719-901-33	DIODE 1SS133			
D310	8-719-901-33	DIODE 1SS133			
D311	8-719-901-33	DIODE 1SS133			
D312	8-719-910-92	DIODE HZ9A2L			
D314	8-719-200-02	DIODE 10E-2			
D315	8-719-901-33	DIODE 1SS133			
D401	8-719-901-33	DIODE 1SS133			
D402	8-719-901-33	DIODE 1SS133			
D403	8-719-901-33	DIODE 1SS133			
D404	8-719-901-33	DIODE 1SS133			
D405	8-719-901-33	DIODE 1SS133			
D406	8-719-907-69	DIODE BG5532K			
D407	8-719-907-71	DIODE PR5532K			
D408	8-719-907-67	DIODE AA5532K			
D409	8-719-907-69	DIODE BG5532K			
HE	8-825-724-00	HEAD, ERASE EF-201-36			
HRP	8-829-373-30	HEAD, REC/PB (PP181-3602C)			
IC101	8-752-002-70	IC CX20027			
IC201	8-752-002-80	IC CX20028			
IC301	8-759-101-01	IC CX10032			
IC302	8-759-700-47	IC CX10035			
IC303	8-759-600-02	IC M5218L			
IC304	8-759-700-46	IC CX10034			
IC401	8-759-201-44	IC TC9310N-015			

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- Components for right channel have same values as for left channel. Reference numbers of capacitor and resistor are coded from 200.

CAPACITORS:
- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

COILS
- MMH : mH, UH : μH

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SEMICONDUCTORS
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

TC-V3

ELECTRICAL PARTS

Ref.No.	Part No.	Description
RV101	1-226-991-00	RES, VAR, SLIDE 20K/20K
RV102	1-226-236-00	RES, ADJ, CARBON 10K
RV103	1-226-236-00	RES, ADJ, CARBON 10K
RV104	1-226-236-00	RES, ADJ, CARBON 10K
RV201	1-226-991-00	RES, VAR, SLIDE 20K/20K
RV202	1-226-236-00	RES, ADJ, CARBON 10K
RV203	1-226-236-00	RES, ADJ, CARBON 10K
RV204	1-226-236-00	RES, ADJ, CARBON 10K
S1 ⚠	1-553-318-00	(AEP,UK,E).....SWITCH, PUSH (AC POWER)
S1 ⚠	1-553-319-00	(US,Canadian)...SWITCH, PUSH (AC POWER)
S101	1-554-033-00	SWITCH, SLISE
S102	1-554-033-00	SWITCH, SLISE
S103	1-554-033-00	SWITCH, SLISE
S104	1-554-033-00	SWITCH, SLISE
S301	1-554-447-00	SWITCH, PUSH (3 KEY)
S302	1-554-447-00	SWITCH, PUSH (3 KEY)
S303	1-554-447-00	SWITCH, PUSH (3 KEY)
S401	1-553-856-00	SWITCH, KEY BOARD
S402	1-553-856-00	SWITCH, KEY BOARD
S403	1-553-856-00	SWITCH, KEY BOARD
S404	1-553-856-00	SWITCH, KEY BOARD
S405	1-553-856-00	SWITCH, KEY BOARD
S406	1-553-856-00	SWITCH, KEY BOARD
S407	1-553-856-00	SWITCH, KEY BOARD
S408	1-553-856-00	SWITCH, KEY BOARD
S409	1-554-208-00	SWITCH, SLIDE
S551	1-554-205-00	SWITCH, SLIDE
S552	1-554-205-00	SWITCH, SLIDE
S553	1-554-205-00	SWITCH, SLIDE
S554	1-554-205-00	SWITCH, SLIDE
S901 ⚠	1-526-576-00	(E)...SELECTOR, POWER VOLTAGE
SSF101	1-235-186-00	ENCAPSLATED COMPONENT
SSF201	1-235-186-00	ENCAPSLATED COMPONENT
T301	1-433-267-00	TRANSFORMER, OSCILLATOR

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· All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
MF:μF, PF:μμF.

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· All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

· F : nonflammable

COILS
· MMH : mH, UH : μH

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

Sony Corporation
Consumer Products Group
Technical Support Dept.

English
83C04138-1
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ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R139	1-247-839-00	CARBON	2.2K	5%	1/6W
R140	1-247-863-00	CARBON	22K	5%	1/6W
R141	1-247-847-00	CARBON	4.7K	5%	1/6W
R142	1-247-839-00	CARBON	2.2K	5%	1/6W
R150	1-247-855-00	CARBON	10K	5%	1/6W
R151	1-247-847-00	CARBON	4.7K	5%	1/6W
R152	1-246-497-00	CARBON	10K	5%	1/4W
R153	1-246-473-00	CARBON	1K	5%	1/4W
R154	1-247-879-00	CARBON	100K	5%	1/6W
R155	1-247-865-00	CARBON	27K	5%	1/6W
R156	1-247-837-00	CARBON	1.8K	5%	1/6W
R157	1-247-815-00	CARBON	220	5%	1/6W
R158	1-247-864-00	CARBON	24K	5%	1/6W
R160	1-247-851-00	CARBON	6.8K	5%	1/6W
R161	1-247-843-00	CARBON	3.3K	5%	1/6W
R163	1-247-833-00	CARBON	1.2K	5%	1/6W
R165	1-247-838-00	CARBON	2K	5%	1/6W
R168	1-247-863-00	CARBON	22K	5%	1/6W
R169	1-247-863-00	CARBON	22K	5%	1/6W
R170	1-247-863-00	CARBON	22K	5%	1/6W
R171	1-247-863-00	CARBON	22K	5%	1/6W
R172	1-247-839-00	CARBON	2.2K	5%	1/6W
R180	1-247-855-00	CARBON	10K	5%	1/6W
R181	1-247-861-00	CARBON	18K	5%	1/6W
R182	1-247-847-00	CARBON	4.7K	5%	1/6W
R301	1-247-857-00	CARBON	12K	5%	1/6W
R302	1-247-840-00	CARBON	2.4K	5%	1/6W
R303	1-247-858-00	CARBON	13K	5%	1/6W
R304	1-247-839-00	CARBON	2.2K	5%	1/6W
R305	1-247-842-00	CARBON	3K	5%	1/6W
R306	1-247-829-00	CARBON	820	5%	1/6W
R310	1-247-809-00	CARBON	120	5%	1/6W
R311	1-247-839-00	CARBON	2.2K	5%	1/6W
R312	1-247-868-00	CARBON	36K	5%	1/6W
R313	1-247-879-00	CARBON	100K	5%	1/6W
R326	1-247-851-00	CARBON	6.8K	5%	1/6W
R327	1-247-843-00	CARBON	3.3K	5%	1/6W
R328	1-247-849-00	CARBON	5.6K	5%	1/6W
R329	1-247-816-00	CARBON	240	5%	1/6W
R330	1-247-843-00	CARBON	3.3K	5%	1/6W
R331	1-247-871-00	CARBON	47K	5%	1/6W
R332	1-247-871-00	CARBON	47K	5%	1/6W
R333	1-247-855-00	CARBON	10K	5%	1/6W
R334	1-247-855-00	CARBON	10K	5%	1/6W
R336	1-247-857-00	CARBON	12K	5%	1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R337	1-247-857-00	CARBON	12K	5%	1/6W
R338 ⚠	1-217-529-00	FUSIBLE	33	5%	1/4W
R340	1-247-823-00	CARBON	470	5%	1/6W
R341	1-247-823-00	CARBON	470	5%	1/6W
R342	1-247-847-00	CARBON	4.7K	5%	1/6W
R343	1-247-831-00	CARBON	1K	5%	1/6W
R344	1-247-879-00	CARBON	100K	5%	1/6W
R345	1-247-871-00	CARBON	47K	5%	1/6W
R346	1-247-871-00	CARBON	47K	5%	1/6W
R347	1-247-855-00	CARBON	10K	5%	1/6W
R348	1-247-839-00	CARBON	2.2K	5%	1/6W
R349	1-247-839-00	CARBON	2.2K	5%	1/6W
R351	1-247-823-00	CARBON	470	5%	1/6W
R352	1-247-823-00	CARBON	470	5%	1/6W
R353	1-247-823-00	CARBON	470	5%	1/6W
R354	1-247-823-00	CARBON	470	5%	1/6W
R355	1-247-823-00	CARBON	470	5%	1/6W
R356	1-247-887-00	CARBON	220K	5%	1/6W
R357	1-247-855-00	CARBON	10K	5%	1/6W
R358	1-247-847-00	CARBON	4.7K	5%	1/6W
R359	1-247-879-00	CARBON	100K	5%	1/6W
R360	1-247-831-00	CARBON	1K	5%	1/6W
R401	1-247-872-00	CARBON	51K	5%	1/6W
R402	1-247-879-00	CARBON	100K	5%	1/6W
R403	1-247-863-00	CARBON	22K	5%	1/6W
R404	1-247-863-00	CARBON	22K	5%	1/6W
R405	1-247-863-00	CARBON	22K	5%	1/6W
R406	1-247-839-00	CARBON	2.2K	5%	1/6W
R407	1-247-839-00	CARBON	2.2K	5%	1/6W
R408	1-247-819-00	CARBON	330	5%	1/6W
R409	1-247-827-00	CARBON	680	5%	1/6W
R410	1-247-815-00	CARBON	220	5%	1/6W
R411	1-247-815-00	CARBON	220	5%	1/6W
R412	1-247-831-00	CARBON	1K	5%	1/6W
R413	1-247-831-00	CARBON	1K	5%	1/6W
R414	1-247-831-00	CARBON	1K	5%	1/6W
R415	1-247-831-00	CARBON	1K	5%	1/6W
R416	1-247-831-00	CARBON	1K	5%	1/6W
R417	1-247-831-00	CARBON	1K	5%	1/6W
R418	1-247-831-00	CARBON	1K	5%	1/6W
R419	1-247-831-00	CARBON	1K	5%	1/6W
R420	1-247-831-00	CARBON	1K	5%	1/6W
R421	1-247-879-00	CARBON	100K	5%	1/6W
R422	1-247-855-00	CARBON	10K	5%	1/6W
R423	1-247-819-00	CARBON	330	5%	1/6W
R424	1-247-855-00	CARBON	10K	5%	1/6W

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- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
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SEMICONDUCTORS
In each case, U : μ, for example:
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STEREO CASSETTE DECK

TC-V3

SUPPLEMENT

File this supplement with the service manual.

REC/PB head and the values of capacitors, resistors have been changed.

US Model
Serial No. 80001 and later

Canadian Model
Serial No. 700001 and later

AEP Model
Serial No. 503501 and later

UK Model
Serial No. 602001 and later

E1 Model
Serial No. 300501 and later

E2 Model
Serial No. 400601 and later

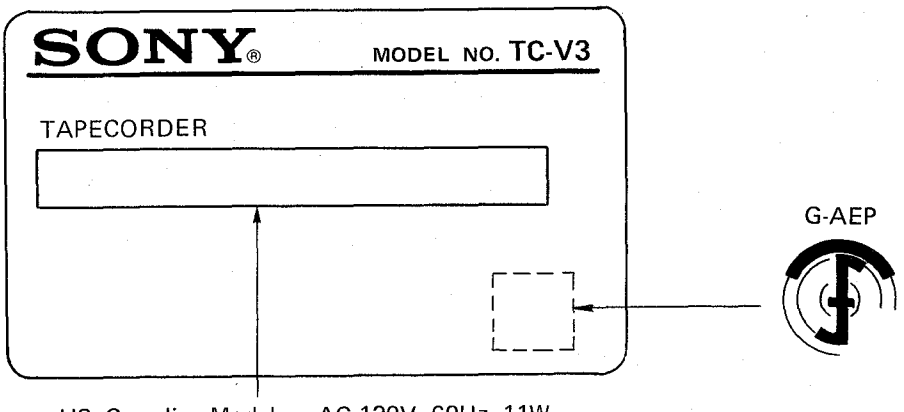
No. 1
May, 1983

Former			New	
8-829-373-30	**PP181-3602C**		**8-825-507-50**	**PP227-3602C**
C155, 255	0.018		1-130-620-00	0.01
C157, 257	0.047		1-130-623-00	0.018
C110, 210	820p		1-162-108-00	680p
R326	6.8k	→	1-247-852-00	7.5k
R327	3.3k		1-247-844-00	3.6k
R328	5.6k		1-247-850-00	6.2k
R157, 257	220		1-247-815-00	100
R158, 258	24k		1-247-861-00	18k
R161, 261	3.3k		1-247-840-00	2.4k
Added	C156, 256	1-108-561-00	0.0018	

MODEL IDENTIFICATION

– Specification Label on Jack Plate –

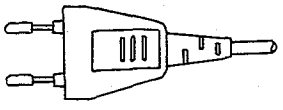
Model number label (G-AEP) has been added.



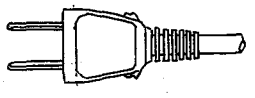
US, Canadian Model: AC 120V 60Hz 11W
AEP Model: AC 220V ~ 50/60Hz 11W
UK Model: AC 240V ~ 50/60Hz 11W
E Model: AC 110, 120, 220, 240V ~ 50/60Hz 11W
G-AEP Model: AC 220V ~ 50/60Hz 11W

– Power Cord –

E1 model: euro-plug



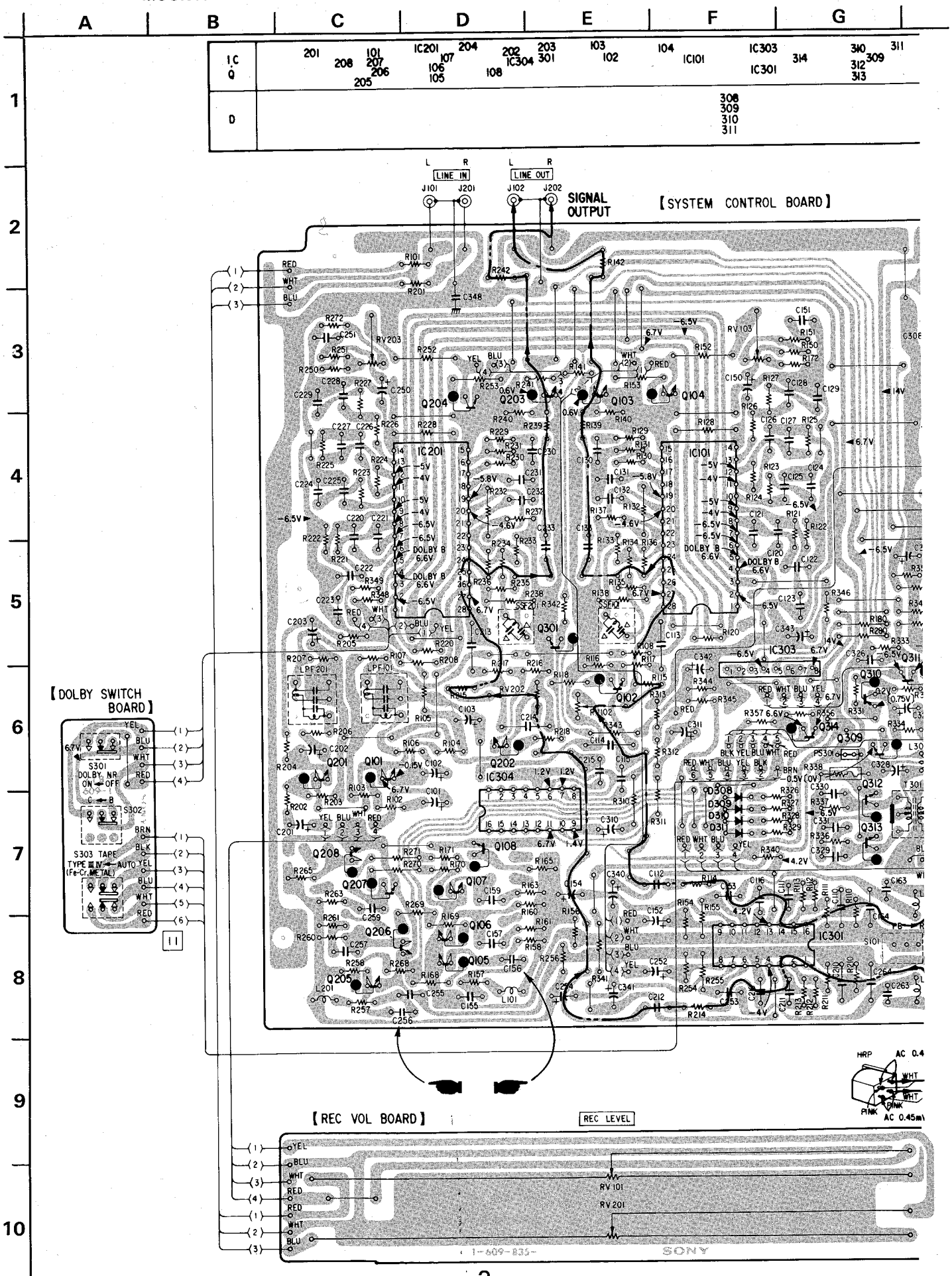
E2 model: parallel blade plug



SONY®
SERVICE MANUAL

SUPPLEMENT NO. 1

MOUNTING DIAGRAM



SCHEMATIC DIAGRAM